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EXAMINATION OF THE EFFECT OF REGULATORY POLICY ON THE ECONOMY AND BUSINESS GROWTH

HEARING

BEFORE THE

SUBCOMMITTEE ON
REGULATORY AFFAIRS AND FEDERAL
MANAGEMENT

OF THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

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EXAMINATION OF THE EFFECT OF REGULATORY POLICY ON THE ECONOMY AND BUSINESS GROWTH

THURSDAY, SEPTEMBER 27, 2018

U.S. SENATE,
SUBCOMMITTEE ON REGULATORY,
AFFAIRS AND FEDERAL MANAGEMENT,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:05 a.m., in room SD–342, Dirksen Senate Office Building, Hon. James Lankford, Chairman of the Subcommittee, presiding.

Present: Senators Lankford, Heitkamp, and Carper.

OPENING STATEMENT OF SENATOR LANKFORD[1]

Senator LANKFORD. Good morning, everyone. Welcome. I know this is the most anticipated hearing of the day on the Hill. [Laughter.]

I appreciate you all being here. This is today's Subcommittee hearing titled "Examination of Regulatory Policy on the Economy and Business Growth." We are examining the Administration's regulatory policy and how it has influenced the economy.

As we begin this conversation, it is important to be clear that well-written regulations are a necessary facet of an orderly society. This is not an anti-regulation hearing. It is how it is done, what is done, how often do they put out, and, quite frankly, it is my belief that well-designed regulations bring clarity for individuals and businesses alike. It provides safety, it provides boundaries, it provides a clear path for where we are going to go in business in the future.

Regulations are necessary to carry out the laws passed by Congress, and they must be promulgated carefully and in a deliberate manner with thorough analysis done on the front end to avoid lawsuits and delays on the back end.

However, over the years through multiple Administrations, there has been an onslaught of regulations. Some became a drag on our economy. The new term "regulatory burden" has been used to describe how regulations affected both small and large businesses and the economy in general.

Like most Members of Congress, I can attest that over the years I held many meetings with constituents, not to talk about a single

[1] The prepared statement of Senator Lankford appears in the Appendix on page 31.

problem regulation but, instead, about the accumulation of regulations and the effect that has had for them. Quite frankly, many of my constituents in Oklahoma just a few years ago would sit down with me and I would say, "What is it that you want to talk to me about?" and they would say, "I do not have a specific thing. I just want you to make it stop because we cannot keep up."

How big is the regulatory burden has been the challenge. As a Nation, we spend nearly $2 trillion a year on regulatory compliance. There is a question to say: Is all that wrong? No. There are a lot of safety issues; there are a lot of things that are perfecting our way of handling civil rights and such that are exceptionally important to us to be able to maintain. We have to be able to figure out how to be able to do it wisely and well.

This Administration, through various Executive Orders (EO) and policy changes, has taken significant steps to reform the administrative process. These actions have spurred a marked increase in optimism from individuals and businesses, which is strengthening our economy and lowering unemployment.

According to many economists, the recent increases in gross domestic product (GDP) are partially the result of the certainty that comes through regulatory stability.

While I applaud the Administration's focus on breaking the cycle of piling one regulation on top of another, the Executive Branch alone cannot provide long-term regulatory stability. That responsibility rests with Congress.

This Committee has debated legislation that will set clear guidelines for agencies—not to dictate a particular outcome, but simply to require them to complete thorough analysis before they issue a rule.

Commonsense things such as measuring the full impact of a rule, consulting with State, local, and tribal governments, and listening to small business owners at all stages of the process are just a few of the ideas that Congress needs to address and pass.

I am optimistic that there are areas of agreement, as Senator Heitkamp have talked about often. There are ways that Congress can work together with the Executive Branch to bring long-term regulatory stability, which will add to GDP; that means jobs for Americans, and that means increased wages for Americans. And it also helps provide a buffer on economic recession.

I have termed this Subcommittee as the "nerdiest Subcommittee in the Senate," and we are probably going to prove it again today. But this conversation is important to us, and it will be important to people in ways that they will never understand as we just deal with the availability of jobs, the wages for jobs, and the expansion of business in the days ahead.

With that, I recognize Ranking Member Heitkamp for her opening remarks.

OPENING STATEMENT OF SENATOR HEITKAMP

Senator HEITKAMP. Thank you, Chairman Lankford.

This is such an important area, and I completely concur in what Senator Lankford said. I think that you see a business optimism that is a result of a sense that at least someone is going to listen to us about regulation. At least we have a chance.

The question we have to ask is: How permanent is that? How can we reestablish some kind of permanent solutions to the problems whether they are dealing with systemic regulatory reform or whether they are dealing with individual regulations?

When you look at what has been happening in the rollback of individual regulations, obviously the courts are playing a role today in stays and in questioning whether those are the regulations. A good example is the Clean Power Plan (CPP). I think the Clean Power Plan was folly. I think that it was wrongly decided at the Environmental Protection Agency (EPA). It needed to be rolled back.

Now we are in this situation where we have a period of time to try and fix the problem, to respond to the Massachusetts case, and actually have a regulation that works. Instead, we are in litigation.

And so there are two changes for that: one, systemic reform, because I have reminded my colleagues especially on my side of the aisle: Why would you ever want to be the party of irrational regulation, duplicative regulation? Why would you ever want to be headed in that direction?

The challenge that we have is making sure we have the right regulation. But we also have a challenge here in making sure that Congress does its job.

When you see years and years and years of litigation on the Waters of the United States—it has been in litigation for probably 30 years. At what point do we say enough is enough and we are going to provide congressional direction? Millions of dollars spent in litigation, uncertainty which swings with the political winds. And so what we want to talk about is how to do this right, and I think Senator Lankford and I are genuinely interested in what you have to say, genuinely interested in how we can get this done.

And the last thing I am going to say, it is something that we kind of went through yesterday, which is we can get in our corners and get that bill that might make a nice 30-second ad that you could say, "Look what I have done." But you are not doing anything by introducing a bill. You are not doing anything by getting a bill on a partisan vote out of committee. You have to roll up your sleeves and get the work done, and that means working across the aisle, coming to some kind of general terms, and solving this problem.

And so I look forward to your testimony. I look forward to continuing to work with Senator Lankford. We definitely have had some exciting—well, exciting by our standards, I guess.

Senator LANKFORD. By our standards.

Senator HEITKAMP. Yes, by our standards—exciting conversations about how to solve these issues, and I want to thank you all for your commitment. You teased a little bit about this is the most exciting hearing. It may be one of the most important hearings when you look at the public, when you look at the business, when you look at consumers, when you look at the citizens. This is the kind of work that they want us to do.

And so welcome, all of you, and thank you so much for your time.

Senator LANKFORD. Thank you, Senator Heitkamp.

Let me proceed to the witness testimony, and I am going to introduce all four of you and then allow the four of you to actually give testimony.

Howard Shelanski is the former Administrator of the Office of Information and Regulatory Affairs (OIRA), a post that he held from 2013 until January 2017. From 2009 to 2011, Mr. Shelanski served as the Deputy Director of the Federal Trade Commission's Bureau of Economics and served as Director there from 2012 to 2013. Mr. Shelanski has also served as the Chief Economist of the Federal Communications Commission and Senior Economist on President Obama's Council of Economic Advisers. He is currently a professor of law at Georgetown University Law Center and has been in frequent conversations here for us. We are very grateful to be able to have you back here as a private citizen. Thanks for all your service to the Nation before in public office, and we are always grateful to have another redhead on the panel and in the conversation, but we really do appreciate your bringing your insight back to this conversation again.

Dustin Chambers is a professor of economics at the Perdue School of Business at Salisbury University, a senior affiliated scholar for the Mercatus Center at George Mason University, and a policy adviser at the Heartland Institute. Dr. Chambers has published widely on topics of income inequality, poverty, and economic growth. He earned his M.A. in economics from UCLA and his Ph.D. in economics from the University of California at Riverside. Thank you for being here.

Karen Kerrigan is the president and Chief Executive Officer (CEO) of the Small Business & Entrepreneurship (SBE) Council and is the group's chief advocate for its members. She regularly writes and testifies on key issues impacting entrepreneurs and the economy and has been appointed to numerous Federal advisory boards, including the National Women's Business Council and regularly leads roundtables at the White House Economic Summits. Thank you for being here and for testifying today.

Maria Ghazal is senior vice president and counsel for the Business Roundtable where she directs strategic initiatives across the organization and oversees policy development and advocacy for Business Roundtable Corporate Governance and Smart Regulation Committees. Prior to joining Business Roundtable in 2005, Ms. Ghazal was director of health policy at the American Benefits Council, served as director of government relations at Verizon, and worked as a legislative assistant in the Metropolitan Life Insurance Company. Her career began as an aide to Senator Daniel Patrick Moynihan. That is quite a heritage as well.

Thank you to all of you for being here and for your preparation. We have received your written testimony and are grateful to be able to get oral testimony as well.

It is the custom of the Subcommittee to swear in all witnesses that appear before us, so if you do not mind, would you please stand and raise your right hand? Do you swear that the testimony you are about to give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. SHELANSKI. I do.

Mr. CHAMBERS. I do.

Ms. KERRIGAN. I do.

Ms. GHAZAL. I do.

Senator LANKFORD. Thank you. You may be seated. Please let the record reflect that all witnesses answered in the affirmative.

Mr. Shelanski, you will kick us off today with your testimony. Thank you again for being here, and we look forward to receiving that.

TESTIMONY OF THE HONORABLE HOWARD SHELANSKI,[1] PROFESSOR OF LAW, GEORGETOWN UNIVERSITY LAW CENTER

Mr. SHELANSKI. Thank you very much, Chairman Lankford.

Chairman Lankford, Ranking Member Heitkamp, thank you very much for inviting me to testify before you today. It is always an honor, and particularly so given the importance of the issues that we are going to be discussing. I commend the Subcommittee for its continued hard work on issues that are of vital importance and that are not always easy.

I wish to make three general points in my oral testimony today.

The first is that regulation must be done carefully, with rigorous attention to costs and benefits.

The second is that regulation should take account of how its costs might differ for entities of varying sizes.

And the third is that the same careful assessment of costs and benefits that applies to rulemaking should apply to deregulation.

The criteria for any regulatory reform should be whether it advances the above three principles and whether it is neutral in its impact on the weighing of regulatory costs and benefits.

One of the signature achievements of the United States regulatory system over the past 40 years has been the increasingly central role of cost-benefit analysis. When President Reagan signed Executive Order 12291 in 1981, he established the process of centralized review of Executive Branch regulations based on cost-benefit principles.

Despite concern in many quarters about the centrality of cost-benefit analysis that emerged under President Reagan's Executive Order, when President Clinton took office in 1993, instead of repealing Executive Order 12291, he revised and updated the order into Executive Order 12866. That order, Executive Order 12866, remains in force today, affirmed and expanded by Executive Orders from Republican and Democratic Administrations alike.

For purposes of this hearing, I want to focus on two core principles of Executive Order 12866: that the benefits of any regulation must justify the costs the rule imposes on society, and that agencies should regularly review the continuing effectiveness of the rules they already have on the books. Regulatory reform should neither get in the way of sound assessment of costs and benefits nor put an undue thumb on the scales toward one side of that balance.

For cost-benefit analysis to be meaningful, agencies need to take both costs and benefits seriously. Unfortunately, polarized arguments that emphasize one of those values while ignoring the other too often characterize debates over regulation. For example, regu-

[1] The prepared statement of Mr. Shelanski appears in the Appendix on page 33.

latory advocates have often opposed weighing quantified economic costs against health and safety benefits. Despite occasional statements from advocates that we should never trade lives for lower social costs, we do it every day. The speed limit of 15 miles per hour would save many thousands of lives, but society would not bear the costs, nor should it, of such a policy.

Regulatory costs are there for an inherent factor in societal decisions about what kinds of rules it wants, and even if there is no requirement—and I do not believe there should be—that a rule's quantifiable benefits always exceed its quantifiable costs, rigorous analysis of regulatory costs allows society to know how much it is paying for the policies and protections it chooses.

On the other side of the debate, advocates of non-regulation or deregulation sometimes focus too exclusively on the costs of a given rule, without acknowledging or accurately accounting for the very real benefits to society that could be lost. For example, when the EPA set forth to reform the Clean Power Plan rules—and those rules might indeed have been in need, as Senator Heitkamp stated in her opening statement, of some revisiting and some reform—there was very little discussion of the benefits that the rule would bring in a lot of the advocacy surrounding that repeal. Indeed, when the EPA Administrator went public with the plans, Chris Wallace, while interviewing him on television, pointed out that that rule was predicted to eventually eliminate 90,000 asthma attacks, 300,000 missed school and work days, and 3,600 premature deaths each year. Mr. Wallace's simple question was: What was the EPA's plan to make sure that society got those benefits at the same time that the costs of the rule were being reformed?

At that point there was not a very good answer to that question. There needs to be a good answer to the question of the foregone benefits and not too narrow a focus on the costs that would be saved from deregulatory efforts.

Beyond serving as illustrative anecdotes, the above examples also hint at an important challenge for cost-benefit analysis, and one to which regulatory reform should be attuned: Regulatory costs are often more salient and easier to quantify than regulatory benefits. Regulatory benefits often accrue far in the future and are spread broadly across millions of individuals. Moreover, the benefits of regulation, especially to any given individual, might be uncertain. Regulatory benefits can, therefore, be less salient for people.

The fact that costs can be more readily quantifiable and more likely to regulate stakeholder advocacy than benefits is important because it suggests that the legislative creation of new requirements for the regulatory process might not fall symmetrically on the cost and benefit sides of the ledger. Therefore, while the most important thing for regulatory reform is to ensure that it advances analysis of both costs and benefits in rulemaking, it is also important to ensure that legislation that is neutral on its face does not, in actual practice, improperly tilt the analysis of costs and benefits in a way that harms society over time.

I see that my time is up. I will reserve my comments on the other matters for your questions. Thank you.

Senator LANKFORD. Thank you. Mr. Chambers.

TESTIMONY OF DUSTIN CHAMBERS, PH.D.,[1] PROFESSOR OF ECONOMICS, DEPARTMENT OF ECONOMICS AND FINANCE, FRANKLIN P. PERDUE SCHOOL OF BUSINESS, SALISBURY UNIVERSITY

Mr. CHAMBERS. Good morning, Chairman Lankford, Ranking Member Heitkamp, and the not-in-attendance Members of the Committee. I thank you for inviting me to testify this morning.

Regulations that protect health, safety, and the environment are absolutely necessary, as Senator Lankford stated in his opening remarks. However, red tape, to paraphrase Laura Jones, are rules and policies that do little to serve the public interest while creating financial costs or frustration to producers and consumers, including outdated, redundant, inconsistent, and needlessly complex rules.

My testimony today focuses on three unintended consequences of an expanding and complex body of Federal regulation:

One, the unchecked growth of regulation, especially when it includes red tape, reduces economic growth, the economy, and reduces living standards for most Americans;

Two, regulatory accumulation harms small businesses;

And, three, the buildup of Federal regulation increases poverty rates and increases consumer prices paid by all, especially the poorest consumers.

To address my first point, a 2016 study by Coffey, McLaughlin, and Peretto used RegData, a state-of-the-art database which identifies regulatory restrictions by industry to estimate the impacts of regulations on the U.S. economy. They found that regulations trimmed U.S. economic growth between 1977 and 2012 by about 0.8 percentage points annually. Now, that might seem like a small number, but to put it in perspective, if the quantity of regulations on the books had been held constant between 1980 and 2012—and that does not preclude improving the regulations over time, just not increasing the total number in the aggregate—they estimate that the economy would have been $4 trillion larger in 2012, or 25 percent bigger, than what we actually experienced. If you divide that by the population, that is $13,000 additional income for every man, woman, and child in the United States. Their findings were consistent with other studies and demonstrates the unintended impact of costly and ineffective regulations on the U.S. economy.

To address my second point, there is disturbing evidence that small businesses are more negatively impacted by accumulating regulations than their larger competitors. In a 2017 study, Bailey and Thomas found that rising levels of Federal regulations are associated with reductions in both the formation of new firms and new employee hiring. Interestingly, when controlling for firm size, this effect appears to only apply to smaller firms.

In a similar study released this year, I and two colleagues also found that a 10-percent increase in Federal regulation is associated with a loss of about 25,000 small businesses. Clearly, the burden of complying with costly and ineffective regulations harms small business.

Finally, to address my third point, I and two co-authors found a positive relationship between Federal regulations and poverty rates

[1] The prepared statement of Mr. Chambers appears in the Appendix on page 38.

at the State level. Specifically, we discovered that a 10-percent increase in the Federal regulatory burden at the State level is associated with a 2.5-percent increase in that State's poverty rate. This result implies that a 10-percent across-the-board reduction in Federal regulations, particularly one aimed at red tape, would lift an estimated 1 million people above the poverty line.

Unfortunately, the regressive effects of regulatory accumulation do not stop there. They also harm poor households in the form of higher consumer prices. In a 2018 study, I and two colleagues estimated that a 10-percent increase in Federal regulations is associated with a 1-percent increase in overall consumer prices. We also determined that the poorest households spent a larger share of their income on the most heavily regulated goods and faced an average inflation rate that was 18 percent greater than households in the top income category. These results demonstrate that red tape harms the poor both directly by boosting the poverty rate and indirectly by driving up the price of items frequently purchased by the poor.

In closing, given that the unintended consequences of unchecked regulatory expansion, which include lower rates of economic growth, reduced entrepreneurship, higher rates of poverty, and higher prices for all consumers, especially the poor, the need for meaningful regulatory reform which slashes red tape but not high-quality fundamental regulation while preserving rules that protect workers, consumers, and the environment should be apparent. Moreover, the ability to stimulate the economy without impacting the Federal budget or the national debt through increased spending or tax cuts is especially appealing.

Thank you.

Senator LANKFORD. Thank you. Ms. Kerrigan.

TESTIMONY OF KAREN KERRIGAN,[1] PRESIDENT AND CHIEF EXECUTIVE OFFICER, SMALL BUSINESS & ENTREPRENEURSHIP COUNCIL

Ms. KERRIGAN. Thank you Chairman Lankford and Ranking Member Heitkamp for holding this important hearing on regulatory policy and its impact on the economy and business growth. I am honored to be able to represent the Small Business & Entrepreneurship Council and our members this morning. And also thank you for your work on advancing reforms that will improve and modernize the regulatory process. SBE Council and our members appreciate your leadership in this critical area.

Current regulatory policy and the general direction of policy have been very positive for small businesses. Entrepreneurs feel liberated in a sense that they can focus more intently on growing their businesses rather than being preoccupied by new regulatory threats that could impact costs and competitiveness. Their positivity is strong, as reported by all the key surveys that measures small business optimism. It is historically high, by some measures, and this is not only reflected in how entrepreneurs feel about the business climate, but also in their own businesses' bottom line and

[1] The prepared statement of Ms. Kerrigan appears in the Appendix on page 112.

performance due to increased sales and revenues and opportunities for expansion.

This, of course, has translated into more hiring, investment, improved wages, and expanded opportunities for workers. Our members and small business owners tell us their optimism and the improved business environment are directly tied to Federal policy, and one of the key pieces is the change in regulatory policy. Again, it has been a welcome development.

The President's Executive Orders on streamlining regulation and cutting red tape combined with movement in the Congress on broad regulatory reform and legislation that passed and already signed by the President on specific areas—for example, reforms to improve lending—have made good on the regulatory signals that were sent to small businesses about where Federal policy and actions would be headed at the beginning of the new Administration and the 115th Congress. These signals, and subsequent action, have provided a very powerful boost to entrepreneurs and small businesses.

We are pleased that the agencies are following through on the Executive Orders. In addition, the Small Business Administration (SBA) Office of Advocacy has stepped up to assist with implementation. Their activity with a focus on small business engagement is ongoing and has been very effective. And I applaud the Acting Chief Counsel Major Clark for his leadership and work.

While concern about government regulation has diminished somewhat for small business owners, it remains a priority issue and challenge for many. So there is still work to be done in this regard, and we believe that, in addition to agencies continuing their efforts to weed out and fix regulatory burdens, Congress can play a big part by finishing the work it has started on regulatory reform. This would be a dynamic sequence that would promote regulatory stability and ensure that robust economic growth continues.

SBE Council is very supportive of the reform bills advanced by the broader Committee, and we are particularly passionate about S. 584, the Small Business Regulatory Flexibility Improvements Act. The key pieces of this bill to explore and document the rationale, objective, and legal basis, costs, potential ripple effects, unintended consequences of proposed regulatory actions, and engaging small business owners in this process all on the front end we believe will produce smarter regulation.

The additions the bill makes to the final regulatory flexibility analysis providing the Chief Counsel, Office of Advocacy, with more tools and power, the periodic review of rules, bringing IRS regulations under this process, and providing the waiver of fines for small businesses with respect to first-time paperwork violations all add together to make the regulatory process more accountable, transparent, and friendly to small businesses.

We believe it is important for Congress and the Administration to stay on a reform-minded path as regulatory stability and consistency will help to sustain strong economic growth and competence that we are now experiencing.

We need to restore strong entrepreneurship. The data shows that we are on that path. But what are being called "psychological scars" from the financial crisis and its aftermath remain with us,

which has created an aversion to risk. A long-lasting and strong economic expansion will fuel confidence, which will encourage more people to take the risk of starting a business. Regulatory stability and a better regulatory system will help greatly in this regard.

So thank you again for having SBE Council with you here this morning, and I look forward to our discussion.

Senator LANKFORD. Thank you. Ms. Ghazal.

TESTIMONY OF MARIA GHAZAL,[1] SENIOR VICE PRESIDENT AND COUNSEL, BUSINESS ROUNDTABLE

Ms. GHAZAL. Good morning, Chairman Lankford and Ranking Member Heitkamp. Thank you for inviting me to this important hearing on the economic effects of regulatory policy.

Business Roundtable is an association of chief executive officers of America's leading companies. We work to promote a thriving U.S. economy and expanded opportunity for all Americans through sound public policy. Business Roundtable CEOs support an approach to regulation that meets regulatory goals and promotes economic growth and job creation. We call this approach "smart regulation." Our members believe that smart regulation can be achieved by reforming three key areas: the process for issuing regulations and guidance, the extensive overlap among agency jurisdictions, and the system for permitting major infrastructure projects.

The Trump Administration is taking major steps in each of these areas. I will describe how those actions are already producing improvements, and I will also highlight ways that Congress—starting with this Subcommittee—could codify those improvements and do things the Executive Branch cannot.

The first needed improvement is reforming the process for issuing regulations and guidance documents. By creating uncertainty and imposing enormous costs, the current system obstructs innovation, investment, and compliance. The President has made great progress through a pair of Executive Orders that establish a one-in, two-out goal for every significant new regulation and that institutionalize his regulatory reform agenda. The Administration also broke new ground when the Treasury Department and the Office of Management and Budget (OMB) issued a memorandum of agreement enabling OMB to review certain tax rules.

Business Roundtable members are encouraged by this dramatic shift in regulatory philosophy. After five consecutive years, regulatory costs are no longer the top cost pressure for CEOs, and our CEO Economic Outlook Survey reached an all-time high earlier this year.

The single most important action Congress could take to codify these improvements would be to enact the Regulatory Accountability Act (RAA). Most importantly, the RAA would require agencies to engage with affected stakeholders before developing a proposed rule, ensure that agencies consider the costs and benefits of proposed rules, and make sure that the benefits justify the cost, extend these requirements to independent agencies, and require that major rules include a framework for evaluating how well the rule has actually achieved its goals.

[1] The prepared statement of Ms. Ghazal appears in the Appendix on page 119.

The second needed improvement is to reduce the widespread jurisdictional overlaps among U.S. regulatory agencies. Too often, firms are subject to multiple requirements from multiple agencies on a single issue. In June, the Administration issued a bold plan proposing 32 structural reforms to the Federal Government. These include, for example, consolidating the food safety responsibilities of the Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA). Individual agencies are also taking steps to rationalize their operations. Business Roundtable members are enthusiastic about several of these reforms, and we are optimistic that the Administration may be able to make new progress in reducing regulatory overlaps.

This Subcommittee and its parent Committee can play a key oversight role here, identifying overlap problems and engaging agencies, including independent agencies, to address them. To assist you in the process, Business Roundtable will release a white paper later this year describing the problem and highlighting options to reduce these overlaps. Our examples will include memorandum of understanding (MOUs), interagency working groups, lead regulators, and joint rulemaking.

The third needed improvement is to streamline and expedite approval processes for major infrastructure projects. Gaining approval to build a new bridge or factory typically involves multiple Federal agencies with overlapping jurisdictions, no real deadlines, and no single entity in charge. Congress took a huge step forward when it passed FAST–41, a bipartisan bill that, of course, originated in this Subcommittee.

The Administration is also accelerating and rationalizing the process of permitting infrastructure projects. Most significantly it has issued a new Executive Order and a related memorandum of understanding, and these two do three things: first, they establish a 2-year goal for completing all Federal environmental reviews and decisions for major infrastructure projects; second, mandate that agencies reach one Federal decision; and, third, extend elements of FAST–41 to all projects subject to the National Environmental Policy Act (NEPA) and involving more than one agency. Business Roundtable CEOs strongly support all of these actions.

The most important thing that Congress could do in this area would be to enact a FAST–41 Amendments Act that would repeal the 7-year sunset contained in FAST–41; codify the 2-year goal for environmental reviews; and allow projects under FAST–41 to be prioritized.

Thank you for this opportunity to testify before the Subcommittee. This Subcommittee has led the way in focusing attention on the Federal rulemaking process and has proposed commonsense bipartisan ideas for reform. We thank you for your hard work, and I look forward to your questions.

Senator LANKFORD. Thank you. We look forward to the questions. How about that? We are grateful to be able to have the dialogue and all of your input on it.

Let me just open this up, and we will just dialogue back and forth on this. We will not necessarily have a clock. This will be an ongoing dialogue for all of us.

Mr. Shelanski, I mentioned to you before how grateful we are to have you back again and the insight that you bring to this. The cost-benefit item is a big issue because defining costs and benefits has been such a challenge. So I want to open this up to several pieces of this cost-benefit conversation.

One is: What do you see as the primary portion on determining cost-benefit? Should they be equal? In other words, if the cost is over 10 years, should the benefits also evaluate over 10 years? Because at times some rules said we are going to look at the cost for 10 years but the benefits for 50. So should they be equal in trying to get that kind of percentage? Should they be limited in scope? So, for instance, do you look at the cost-benefit based on the United States or globally? That is another big challenge that we have. And the biggest issue that I see with this is trying to evaluate the benefits long term.

I do not know how you handle weather forecasting, but I am much more trusting of the forecast 2 days from now than I am hearing the weatherman say this is what the weather is going to be like 2 years from now. Sometimes when we do a benefit analysis, we are asking an economist to give us a guess what the benefit will be 20 years from now, and that is tough to swallow with so many different elements in it. It depends completely on the model. So sometimes picking the model really determines your outcome because if I pick the right model, I am going to get the outcome I want, because the benefits will show anything depending on who I model it through.

So I know those are some big issues on cost-benefit, but we have some big issues around that that we have to help provide some definition on. So scope, time, equal amounts, and then how do you pick that model for the benefit?

Mr. SHELANSKI. Thank you, Senator. Those are clearly core and very difficult questions. Let me start with time.

I do not think that it should be a requirement that the benefits are measured over the same timeframe, for example, as the costs. And the only reason that I would say there can be a very systematic difference between the two, regulation often entails a high fixed cost of compliance——

Senator LANKFORD. Up front.

Mr. SHELANSKI. Up front—that might be put in place over a number of years and where the incremental costs then, once you have that compliance system in place, might be somewhat lower. There are a lot of issues that arise out of that, things that we need to be careful about.

Benefits might accrue immediately, so I think in something like workplace safety, those are the kinds of things where workplace safety should sort of happen immediately. Putting in place a different perimeter around a dangerous substance or machine should fairly quickly lead to a reduction in industries. If it does not, we should figure out whether the rule is properly designed.

Other kinds of rules go after activities for which the payoff is far in the future. So let us take respirable coal dust as an example—a very important issue to make sure that mines are as safe as possible for coal miners. We need to have the best available science and economics to make sure that the requirements that are

put in place really do meaningfully reduce that respirable coal dust and do not go to some absurd standard that really is not achievable or not scientifically justified. But the benefits, the payoff from that, there is going to be a reduction in emphysema and conditions like that that are far in the future. And so you are making forecasts about the relationship between dust breathed today, the thing for which the cost put in place that will be reduced in a fairly short order and for which the compliance costs will be incurred over a short order, with speculation about benefits based on the best available epidemiological evidence and scientific evidence far in the future.

If we were to discount the ability to count those benefits, we would never find justification for putting in place a shorter-term cost.

Senator LANKFORD. But let me just pause for a second. If you are going to look at, let us say, a 50-year time period and let us see the benefit, why would you do a 10-year cost and a 50-year time period? If you are going to look at benefits for 50 years, should you not look at costs over that same 50-year timeframe?

Mr. SHELANSKI. So absolutely you should. You just may run into circumstances—and I think there could be a number of them, a number of cases where you could imagine the costs actually cease to continue to accrue after a certain point. And so the emphasis would be on this is going to cost us a ton in 4, 5, or 10 years, let us not look at the benefits beyond that timeframe. Will the benefits over that—and all I am saying is we should not artificially cut short now. If we were to continue the cost, absolutely we should——

Senator LANKFORD. And that is what I am saying, just trying to keep some equal time percentage. And part of the challenge is, again, you have been on both sides of this to be able to study it and look at it and to be able to be on the implementing side as well. The challenge that we have is trying to be able to figure out when a regulator puts out a cost-benefit analysis, they could look at the benefit and say: If I get so many years out, then the benefits will outweigh the cost; so on this particular rule, I want the benefits to be a 50-year; on this one I want it to be a 10-year look. And you can weigh that based on what you are hoping to get as far as the outcome.

Mr. SHELANSKI. And as long as you were taking full account of the costs over whatever period you choose for the benefits, then I think that that is fine. But there is one other really important aspect of that that you got at in your original questions. I do not think the models should be so malleable that they can just be cherrypicked by the regulator, and this is something that certainly during my time at OIRA was maybe one of the harder discussions we had with a number of agencies.

One can build a model to do just about anything and some very modest initial assumptions can actually lead to very significant long-term effects, get you very big costs or very big benefits.

So what we want to make sure of and what I think any regulatory reform should be designed to help ensure is that the selection of the models, the data, the information that feeds into the

models is done on rigorous, neutral, and objective principles insofar as possible.

Now, that does not necessarily mean that there should be a sort of one-size-fits-all rule for what kind of data can be used. Sometimes there are great harms for which there is relatively modest data. But I think the best available science and economics standard that is articulated in the Executive Orders, that is articulated in OMB's Circular A–4, I think that is a very good standard.

Now, sometimes best available will not be good enough. Even that will be too weak and that will be too speculative. And in that case, we are not ready to regulate. We need to learn more. But sometimes there is enough. It may not be the highest level of certainty, but it is sufficient. But it has to be the best available. You cannot say this is pretty good, there is a better one, but it does not give me my results.

Senator LANKFORD. Right. I want to make one more comment; then I want to shift over to Senator Heitkamp on this. It has been a dialogue that we have had several times around this dais with multiple different witnesses, that when we talk about a model, they will respond to me, "Well, this is the best model that is out there," or "This is the only model that is out there. And it says X, Y, Z, and so we are going to get this benefit and so we are going to do it."

My response to that is typically: "So what you are saying is more places need to create more models to get more competition in this area. If industry, if consumer groups, if other are not creating models, then there is no competing model. And until there is a competing model, this is the one we are going to go with." And typically the answer is, "Yes, we only have one model," or "This is the one that is used by certain magazines, and so this is the one that we go with."

Somehow we have to get greater competition in the economic models, and I am sure every economist in the country is somehow excited about the new entrepreneurial opportunities that I am presenting there. But we have to get more voices into this because, for instance, on the cost-benefit analysis, you take any rule and say, well, if we do this, it also creates this certain benefit for a child with asthma or whatever it may be in the future. I do not know of any of them that also would take Mr. Chambers' research and would say, yes, I know, but it also reduces their poverty, which means they will have greater access to housing and food and transportation and greater job opportunities. So does that weigh in the model? And I do not know of any of them that do. And, Mr. Chambers, you may know of some of them that do, but they tend to look at this may affect asthma, but, yes, what will it do to heart disease and other things because they have better access to better-quality food and to be able to get that shift?

It is the challenge of trying to get an economic model that includes everything, and one of the things that we have to have is greater access to more modeling on this to be able to have greater conversation among economists and to get better data and information. I do not know how we get there initially, but we have to be able to work toward that. Senator Heitkamp.

Senator HEITKAMP. And I am not here to pick a fight, but, Mr. Chambers, if you look historically—and as somebody who has been a student of environmental changes—isn't it true that people living in poverty experienced environmental degradation in their communities at higher rates historically?

Mr. CHAMBERS. It is a very interesting question. It is not one that I have studied myself, so I really cannot——

Senator HEITKAMP. But my point to you is that if you take this to the extreme and you eliminate regulation, we have seen that. We have seen it in the 1930s, the 1940s, and the 1950s where hazardous waste sites were typically located in lower-income neighborhoods, where lower-income people suffered a higher rate of health care conditions resulting from environmental conditions, where people working in blue-collar jobs suffered higher rates of injury in the workforce, so I am not picking a fight with you. I do not disagree that overregulation and unnecessary regulation can lead to consequences of increasing costs for goods and services. But, we need to be a little careful because historically, I will tell you, the most injured people from the lack of attention to externalities and what was happening in the externalities came to people in poverty. I do not think anyone sitting here who is a student of history would disagree with that.

Mr. CHAMBERS. Well, I would not interpret my research as giving anyone carte blanche to just eliminate all regulations.

Senator HEITKAMP. Right.

Mr. CHAMBERS. I would agree with you, one needs to preserve regulations that protect the poor, the environment, vulnerable populations. But I think what my research shows is that there is this unintended feedback effect that we need to be cognizant of and that we need to dial in and find truly wasteful and inefficient regulations.

Senator HEITKAMP. So let us go back to the coal dust problem. A lot of people will look at that as respiratory, but coal dust is a dangerous explosive. And so when do we do a cost-benefit analysis on the potential that not implementing policies to the lowest common denominator that is possible at the time while we still continue to allow coal mining, which I think we should, but we have that embedded catastrophic event that could happen, Mr. Shelanski, that creates that kind of nuance in regulatory cost-benefit analysis.

So take a sugar factory. Sugar is explosive. Take an anhydrous factory, which we now find out that that was done on purpose, but there was an overregulation response to what happened there. So we have to find that balance, the balance in your example of 15 miles an hour on the freeway. Everyone would think that is crazy, but yet it probably would prevent most freeway deaths. But we are willing to accept some risk to basically improve the benefits to the economy and the benefits to convenience and whatever else that we are measuring.

So how do we deal with the catastrophic event, the potential of a catastrophic event? And that is for you, Mr. Shelanski.

Mr. SHELANSKI. Thank you very much, Senator Heitkamp. Catastrophic events are a very difficult thing to take into account. I will tell you how I think we should take them into account. I will give

you an example. And I will tell you how we should not take them into account.

One approach is a precautionary principle to say that we must regulate to the level where we eliminate all possibility of the catastrophic event. That is something that is used in a number of places, but it is an extremely costly way to proceed. And it is a very tough thing for society to say, look, certain activities have this small tail risk of something catastrophic happening. But it is a beneficial economic activity for society. If we regulate it to the point that we eliminate all possible risk, we will raise the price of the product; we will reduce the ability of businesses to survive in the industry; we will reduce employment; we will reduce all the follow-on growth that comes from use of that product. Anhydrous is a very good example. Bakken crude, if I may, is a very good example. So if we were to eliminate all tail risks through a precautionary principle, my own view is that is too costly a way to proceed.

So how should we proceed? You can put a probability value on these very tail end risks, and you can assess that what the costs of those tail end risks are. You can model them, or you can use real examples of where there has been an explosion, what was the damage to life and property? And you can figure out, OK, in our cost-benefit analysis of whether or not a rule should be put in place, we can take the expected value or the expected harm from that tail risk, and we can build it into our expected benefits from the rule.

The example I will give you of where we went through this process was the tank car rule that the Department of Transportation (DOT) did over the course of the Obama Administration. This was one of the most hard-fought rules. You had these terribly compelling things that have happened and destroyed communities because of explosions of tank cars.

Now, in almost every one of those cases, there was some interesting additional factor like a very high rate of speed or an engineer that had left the locomotive, things like—and was not able to brake in time. There were human factors, there were additional factors. But you could not get away from the fact that had there been a different kind of tank car, a different kind of substance in the tank, you would have reduced that.

So there was a rush to immediately regulate and solve all the problems, and the initial rule that came across would have made it almost impossible to get crude out of the Bakken because basically the existing stock of tank cars would have been deemed unavailable. It would have required rail companies to put in place braking systems that were unproven and extremely costly. And it would have put in place rates of speed on the rail lines that would have made it impossible for food distribution centers to get food from all around the country because, guess what? We run different kinds of freight on the same rails, and if you are running one train at 18 miles per hour, you are going to stack everything up behind it.

So unpacking all of those costs made it immediately clear that eliminating the tail risk was going to be far too costly. So we said, OK, putting in place, and this sounds like a heartless and cold thing to do, but it is what we do in regulation. You have the value

of a statistical life. What is the value of the life lost? You put a number on that. It is usually around $10 million. What about the injury? What about the cost of property? What do we think the average cost of one of these events will be? The probability is extremely low. Let us multiply it by that cost and factor that into our cost-benefit analysis and see where that takes us on the safety spectrum. And I think we ultimately got to a non-precautionary but nonetheless beneficial safety standard.

Senator HEITKAMP. I want to make a point about that regulation before I turn it back to the Chairman. Early on, even before the high-profile events, there was a request to DOT to regulate, to sit down with us and let us—we know we needed a new generation of tank cars. DOT did not engage, and as a result, the industry created their own standard and started building new tank cars, all of which, because of the failure to address this issue before the catastrophic events, all which led to increased costs and retrofits.

And so it is an example that I frequently use which is the lack of engagement by regulators can sometimes also increase the eventual cost of regulation, because you have not given the certainty and things change. And so I think it is a great example of kind of the challenges that we have. None of us want to be heartless, but the challenge that we have in trying to identify that area of risk. And I just want to say one other thing. Way too often these kinds of regulations come in the aftermath of a catastrophic event or the aftermath of something that intervened that now there is a big rush to judgment.

Probably a good example of that is Dodd-Frank. We just rolled back some Dodd-Frank regulations because it went way too far. So we have to have a more orderly process so it is not reactive, it is proactive in terms of how we need to address these issues.

Senator LANKFORD. Thank you. Senator Carper.

OPENING STATEMENT OF SENATOR CARPER

Senator CARPER. Thanks, Mr. Chairman. Good morning, everyone, thanks for joining us. I enjoyed reading about your backgrounds, especially Howard, whom I have actually known for a while. It is nice to see you all; especially I want to welcome you back. You have sat at this table more than a few times, as I recall, and oftentimes giving us good advice, and we will ask for some more of that today.

Hi, Howard. Do you think there is any prospect for consensus on this panel? I understand this is like we have one minority witness and three majority witnesses. I am told they are especially smart and eager to find consensus on tough issues. Where do you think the consensus lies with this panel maybe on some of these subjects that we are talking about today?

Mr. SHELANSKI. I actually think there is quite a bit of consensus.

Senator CARPER. I love that. Do you want to talk about it?

Mr. SHELANSKI. So I would say that there is going to be some significant difference in what we think the impacts of regulatory burden are, but no difference of opinion on—or the magnitude of those regulatory burdens and the extent to which we can tie certain effects to those regulatory burdens, but there is no disagreement on this panel that regulatory burdens are to be minimized

consistently with achieving health and welfare benefits for society. There is no difference of opinion on this panel about the need to be sensitive to the differing impacts of regulation on businesses of different sizes and the need to preserve the economic growth and access to economic opportunity that comes through small businesses. And I think that there is, fortunately—and this is something that would not have been the case maybe a few years ago—no difference of opinion on this panel about the need for rigorous and careful cost-benefit analysis and good data.

Senator CARPER. Good. I do not usually ask yes or no questions, but I will in this case. Dr. Chambers, are you a professor at Salisbury University?

Mr. CHAMBERS. That is correct, Senator.

Senator CARPER. Is that just south of Delmar, Delaware?

Mr. CHAMBERS. Right. We are about 15 minutes south of Delaware.

Senator CARPER. Delmar, Delaware, part of Delmar is in Delaware; part of it is in Maryland. We describe Delmar as the town that is "too big for one State," so we are happy that you are here.

I am going to ask each of you, do you agree with anything Howard has said? Do you agree with anything he just said in terms of consensus?

Mr. CHAMBERS. Generally, yes.

Senator CARPER. OK. Ms. Kerrigan.

Ms. KERRIGAN. Yes, absolutely, particularly the piece on disparate impact on small businesses and entrepreneurship.

Senator CARPER. Good. Ms. Ghazal?

Ms. GHAZAL. We definitely agree, particularly on economic growth.

Senator CARPER. OK, good. I will start and I will just go down the line. We will start again with Howard. Any thoughts about what we ought to be doing here in Congress to better ensure that we are adequately overseeing the regulatory rollback activity that is occurring in this Administration?

Mr. SHELANSKI. Thank you, Senator.

I have a few thoughts. First of all, I do think that regulatory reform is a worthy legislative endeavor, and you know, there was certainly controversy about that. I do not think I was allowed to come out and say that plainly when I was in office.

Senator CARPER. But now you are a free man.

Mr. SHELANSKI. And Senator Lankford and I and Senator Heitkamp and I had conversations at that time. I do think that there are some things that could be fixed. I do think that independent agencies should not have any less of an obligation to justify the costs and benefits of their rules.

Senator CARPER. We seem to be hearing that more and more.

Mr. SHELANSKI. Yes, and I have always thought that. I never wanted to have them under my jurisdiction as though I were administrator for a number of reasons. But they should have the same requirements. And I do think that there are things that are in the Executive Order that could be usefully elevated to codification. So I do think that there are some things that really could be done, and that would prevent agencies that would seek to potentially bypass OIRA review and the rigor there.

Senator LANKFORD. Just for the record, may I interrupt for just a moment? When you said some things in the Executive Order, there are about 14,000 Executive Orders. Can you name which one——

Mr. SHELANSKI. Let me be very clear. For OIRA Administrators, there is one Executive Order.

Senator LANKFORD. 12866.

Mr. SHELANSKI. It is 12866.

Let me talk about another one that I really like: 13777 that this Administration, that President Trump's Administration has issued. I think the effort to create a regulatory review officer in each agency that has responsibility and accountability and a reporting obligation and a mandate to make retrospective review an ongoing function within the agencies is an excellent one, so long as the resources are provided along with that.

In the Obama Administration, we sought to do that under Executive Orders 13610 and 13563. We got together the Deputy Secretaries. We got them to create these working groups. We required them to report every 6 months on their retrospective review efforts. The President himself was quite engaged in those.

Senator CARPER. Yes, he was.

Mr. SHELANSKI. He came to one of those meetings and really emphasized that this was personally important to him. I think that many of the things in 13777 are worthy permanent objectives of agencies.

An Executive Order I would not like to see codified and one that I have strong differences with, on the other hand, is 13771, the PAYGO two-for-one kind of rule. I would be happy to expand on why not, but I do think there are significant problems. Even if one can understand that as an incentivizing device to observe a regulatory budget and to be careful about issuing new rules, I think any kind of forced mandate to repeal rules is actually contrary to cost-benefit principles because we should look at a rule, if it is still having benefits that exceed its costs, we might want to fix it to make those benefits even higher and those costs even lower. But it makes no sense to have some kind of forced requirement to repeal those rules unless there is really compelling evidence that we have hit a level of cumulative regulation where, when looked at as a whole, the marginal benefits of that one rule are coming at some greater cost to GDP.

I do not see the evidence of that. I have not seen in the economic literature sufficiently robust evidence of that. That is an area where we do need more competition and economic research and additional empirical research, and I really commend Dustin for being one of the few people who is out there contributing very actively to that empirical literature. But I do not like the two-for-one Executive Order.

Senator CARPER. Good. Thank you. I am out of time. Could I just ask one of the witnesses to just kind of respond to—OK, thanks. I will go to one of my other 12 hearings that are underway.

Senator HEITKAMP. You have a lot of people behind you.

Senator CARPER. I can see. I just have a question of Ms. Ghazal. Would you respond to some of what Mr. Shelanski just said. Do you

think he is off his rocker? Do you have anything that you think you might agree with?

Ms. GHAZAL. There is much we agree with, but I guess the point I want to make on behalf of my members is that it is not really any one single regulatory change that has made the difference in how CEOs are feeling at the Business Roundtable. It is really the whole direction. So it is partly one in, two out, and there are definitely some aspects of Executive Order 13777, particularly the things that Howard talked about. But it is more than the whole sentiment. Our President and CEO, Josh Bolten, recently said the same thing, that it is really the sentiment that business leaders no longer have to anticipate the next regulatory hammer. There is a lot more certainty, the fact that all the agencies were asked to ask for comments and looking at what is on the books. So it is the whole change in philosophy.

Now, we also like the regulatory officer idea—the regulatory task force. We like that, again, the Administration has asked for input on regulations. We very much like the Executive Order on permitting and all the aspects of that. But, again, I think our bigger point today is to say that it is the entire philosophy that has changed and really brought a different sentiment.

Senator CARPER. All right. Thanks. I wish I had time for Ms. Kerrigan and Dr. Chambers, but I probably do not. I do not want to get on the bad side of my colleagues here who were kind enough to let me—Ms. Kerrigan, did you want to just quickly say something? Please.

Ms. KERRIGAN. Well, I think in terms of looking at the Executive Orders and what the agency is doing, I think there is a role for Congress to see what the outcome is. For example, there are a lot of positive things that are happening because of the Executive Order. Specifically, the SBA Office of Advocacy has been doing a lot of small business outreach, and they have identified scores and scores and scores of specific regulations that are candidates for potential reform, repeal some type of changes. And all that feedback is going right to the heads of the agencies, as well as the Department of Treasury, so Advocacy is communicating with all the Federal agencies: Here are things that you can do to help small business. And it would be great to have some type of accountability in terms of, well, what are the agencies doing and the feedback that they are getting from small businesses on these specific regulations and how they could be made better, how could they be reformed, repealed, or whatever.

Senator CARPER. All right. Thank you.

My time has more than expired. I would just like to conclude with—I have talked about this in the Environment and Public Works Committee, which is one of my other committees. About 10 or 12 years ago, I think, Senator Lamar Alexander and I—and maybe George Voinovich from Ohio—were meeting with utility CEOs from—there were, I do not know, about seven of them from all over the country, and we were talking about legislation to reduce the emissions of sulfur dioxide, nitrogen dioxide, mercury, and CO2, and we have been talking about—the President has a proposal called "Clear Skies." He called it "Clear Skies." And Lamar, and I think George, and I had a proposal called "Really Clear

Skies." And we got to about the end of the hour-long discussion, and one of the CEOs just like said, "All right. Here is what you should do." It was like he gave the benediction. He said to us, "Here is what you should do with respect to these emissions from utilities." He said, "Tell us what the rules are going to be. Give us a reasonable amount of time and some flexibility, and get out of the way."

That is really what he said. "Tell us what the rules are going to be. Give us a reasonable amount of time and some flexibility, and just get out of the way"—which I think is what EPA in the last Administration tried to do with the Clean Power Plan, which has an implementation that is over 20 years to actually do it. And I think there are not a whole lot of my colleagues here, but this is hugely important stuff. And I just want to commend our Chair and our Ranking Member for pulling us together, and thank you very much for coming in. We will probably come back to you, especially the folks who live in our neighborhood, come back to you again to follow up on this conversation. But thanks. Great to see you all.

Thank you.

Senator LANKFORD. Thanks, Senator Carper.

Ms. Kerrigan, let me ask you a little bit about small business. I want to drill down on that a little bit more. What would help small businesses right now on the regulatory side as far as a framework that went around them? And let me give you some ideas that have been kicked around.

One is to make sure that what the small business advocacy folks have asked for actually happens, and that is, small business folks are at the table when there is a dialogue about a rule. Would that help? And how would that work when a new regulation is being proposed to really make sure that small businesses are there?

Ms. KERRIGAN. I think it is vital that small businesses and entrepreneurs be at the table at the very early end of the regulatory process, that the regulators hear from them directly in terms of what their ideas are for regulating or a specific regulation they may have proposed, so that they can get their feedback in terms of—and perhaps good feedback as well. I mean, it is not all about cost. It is not all about this is going to kill us. Ways that they can make the regulation better, and perhaps some of the unintended consequences I think is very important to look at, and indirect costs.

Senator LANKFORD. Let me drill down on that because that was actually going to be my next question. When you talk to a small business person, they do not break up direct costs and indirect costs because indirect costs affect them just as much as direct costs do. But that is a challenge for regulators and for folks that are developing the model to be able to get direct and indirect, because it is hard to be able to determine what is indirect. How would you recommend that? Because for a small business, that is a really big issue for them.

Ms. KERRIGAN. Well, when you are talking to a small business owner and you are talking to them about a proposed regulation, a good example is this: If there is a financial regulation or a banking regulation or something like that, what you have to build into that is, again, the indirect costs in terms of what does that mean for

capital access or availability of lending. It does have a huge impact on this sector, not only small businesses but also startups that need that type of capital to start and grow.

So I think just talking to business owners about—any industry in general, about how that is going to—the ripple effects and identifying those ripple effects, then you can begin to include that into the model. I am thinking a lot about access to capital because there are so many regulations, either on the books, obviously ones that have been changed through the last banking reform bill that passed, because that is just one of those issues that really does not look at what the impact would be on lending and capital.

Senator HEITKAMP. I just have one quick question, because I have to get to another appointment. But, one of the concerns that I have—and you all have talked about the optimism and everything that is going on right now, that can change tomorrow—not tomorrow, but it can change with a political change. And so our job is to provide systemic, long-term certainty so that you know what the rules are and that we can advance them, whether it is for small business, whether it is for large business, and I am the prime sponsor on RAA. We have been doing a lot on trying to codify—got beat up pretty bad on the independent agencies, then beat up pretty bad on a lot of this. But I am committed to doing it, but we have to be realistic about what we can get done in this time period. And I would really recommend that people not live in a world where you are going to let political wins decide how we are going to manage this issue. We have to come to some kind of broader consensus, and that is what is critically important for me.

I said it yesterday. I said, that is good, and it may be perfect from someone's standpoint, but I want to get something done. And so I think it is that getting something done that we can figure out what is in the middle that really does work.

And so my great apologies. This has been a great panel. Mr. Chairman, thank you so much, and all of you for your time and your continued involvement. I am trying to make this business climate even better for Americans long term, but also recognizing the critical importance that regulation plays in health and safety in our country.

Senator LANKFORD. Thank you, Senator Heitkamp.

OK. We are going to go into a speed round because I want to cover a bunch of different topics with you as well. And let me just make a comment about what Senator Heitkamp was saying on consistency. Consistency is extremely important for business and for planning. Anytime you are investing capital, you want to know what the regulations are now and what they are going to be, and if there is a perception that the next Administration is going to change the rules based on their political perspective, you cannot invest any capital, you cannot do any planning. And we are not in best science land anymore where you started, Mr. Shelanski, before saying let us get best science and information. If each Administration is changing their perspective on regulations and it is their "best science of the day," that is not best science. That is politics. That is I go out and find the model that helps me to do what I want to do and then I do it. We are not in best science. So I do want to bounce a couple questions off quickly.

Mr. Shelanski, I had asked Ms. Kerrigan about direct and indirect costs. It is one thing for the small business owner who sees it. It is a different thing for a regulator trying to be able to manage how you set a policy in place for counting direct and indirect costs. Small businesses are disproportionately affected by that. Mr. Chambers talked about that. Ms. Kerrigan talked about that. How do we manage the issue on small businesses in direct and indirect costs when a new regulation is coming down, not just making sure they are heard, but helping calculate the costs.

Mr. SHELANSKI. Thank you, Senator. So I do think it is very important to think about the fact that small businesses are not just producers; they are consumers of all kinds of inputs that they have to buy for their businesses. So the industries that produce those inputs, to the extent that they may have regulations that raise the cost of what they are providing, they are raising the costs of small businesses. And what we need to figure out is two things: whether or not they are raising the costs to the point that the viability and the access to the marketplace for those small businesses is being compromised; and, second of all, whether the position of small businesses versus large firms that can better absorb those costs is being compromised so they become not only less viable but, even if still viable, less competitive with large firms.

I think this is something that is an important consideration. You do not always have good data, but I think it is absolutely consistent with the existing Executive Orders for Executive Branch regulation and the existing OMB circulars for those secondary costs to be considered.

Given that secondary benefits are often considered in rulemaking, I do not see any basis for an asymmetry when it comes to costs.

Senator LANKFORD. OK. That is very helpful. Let me ask you another quick question on it. Small businesses often ask for a warning the first time rather than a fine from a regulator. I know that you are helping in the writing portion, not in the implementation portion on it as well. But does anyone see an issue with the exception of health and safety issues—I am not talking about an OSHA violation, but with the exception of that, do you see an issue with small businesses getting a warning the first time there is a violation rather than a fine the first time there is a violation?

Mr. SHELANSKI. I think there could be good grounds for that for certain kinds of paperwork violations.

Senator LANKFORD. Again, this is not a health and safety issue.

Mr. SHELANSKI. That is right. These companies do not tend to have, to the extent large companies do, whole parts of their business that are entirely devoted to dealing with paperwork and interactions with the Federal Government. They are, therefore, likely to make mistakes. It might be the very same person who is in charge with key managerial decisions and operational decisions in the company that has to come up to speed with the new rule.

Senator LANKFORD. It is one of my favorite things to do in a small business meeting, is to ask: "How many people got up this morning and read the Federal Register?"

Mr. SHELANSKI. Right.

Senator LANKFORD. So far it has been zero of all the places that I have gone and asked that question. Small business folks do not have someone reading the Federal Register every day, but yet there is this assumption: We wrote it in the Federal Register; you should know this regulation; here is a fine.

Mr. SHELANSKI. Certainly for rules that have only been out for a limited period of time, I could see a case where that would be a fair outcome.

Senator LANKFORD. OK. Ms. Kerrigan, do you have a comment on that?

Ms. KERRIGAN. Mr. Shelanski I think said it best, and, yes, a lot of business owners really do not know that there are changes in a whole range of different types of rules. I think that first-time forgiveness would be terrific for sure.

Senator LANKFORD. OK. All right. This is very helpful.

Ms. Ghazal, I made a comment that was a broad comment about the growth of business based on the stability of regulations. Do you want to add to that at all? I know this has been an issue for the Business Roundtable.

Ms. GHAZAL. Yes, thank you. Certainty and knowing that things will not change really can help with planning. So with planning—and, again, I mentioned this in my testimony. We survey the CEOs quarterly, and we ask them about capital spending, investment, and sales and employment. So we ask that four times a year. It is definitely up. We think a lot of that is due to the regulatory environment. And with certainty, we can build confidence because we do believe that certainty helps with planning; it helps with all of those aspects of growth.

Senator LANKFORD. How do you manage cumulative costs of regulations? Significant regulations have obviously significantly slowed as well under this Administration. It has made an incredible difference as far as people getting caught up on it. But the constant statement I hear over and over again is the cumulative effects. This is clearly in OIRA's window to try to determine what are all the regulations coming from everybody's area. How do you all manage that as far as calculate that?

Ms. GHAZAL. It is difficult. I mean, it is something we hear from our members all the time, that that is one of the big challenges. If you ask anyone to say what is your least favorite regulation, your favorite regulation—we represent all industries with our CEOs—but it is definitely a sentiment that it is all of the regulations put together.

The other issue that comes up quite often is what I mentioned on the overlapping jurisdiction and feeling that you are being regulated on one area by multiple places.

Senator LANKFORD. Mr. Shelanski, how does that get solved? Because this is a constant thing. And Ms. Ghazal talked about, for instance, infrastructure construction. The first thing that I hear from State and local entities when they talk about infrastructure, let us say a highway construction process, is how long it takes and how many people and it is linear in your permitting. And if it is a county project, it will take 6 months; if it is a Federal project, the same project, same area, will take 4 years, and 3½ of that is

permitting. How do we solve that with just the regulatory issues they have to deal with?

Mr. SHELANSKI. So I think a number of the things that Maria set out earlier make just basic common sense. So I would just suggest a couple of things: a deadline and a unified single Federal opinion, for example, a Federal agency opinion on an environmental permitting issue.

Senator LANKFORD. When you say a deadline, everybody says, yes, but what if I bring additional information to bear, what if there is a lawsuit, what if there is—and it goes on and on and on. Deadlines do not seem to be deadlines to actually get things resolved.

Mr. SHELANSKI. Right, and I do not have an answer for you today about exactly how one writes that, but I do know that there is lots of discretionary ability to lengthen the permitting process. There is also sequencing of processes that could be parallel. And then, of course, there is the confusion of two different outcomes, even from two different offices of the same agency. Those kinds of things have to be prevented, and also the sheer number of Federal permits that could be required for a single project, and this is something that I think Administrations from both sides of the aisle have recognized as a problem.

Senator LANKFORD. Who manages that?

Mr. SHELANSKI. Well, so OMB has tried to take the lead in managing through the management side by creating a centralized sort of permitting overseer. That had to be done within the structure of the existing Executive Branch agencies, and at least during my time, there was an effort to put this in the Department of Transportation.

I think there may well need to be in the first instance—and I know this is a bit of a scary word, it does not have the best history—a task force that figures out exactly how many steps are there. That has actually been done. Where can we cut the duplication? And then figure out, give somebody the job of basically centralizing and managing the traffic on that permitting.

Senator LANKFORD. Let me try to clarify this. Are you recommending an entity like OIRA but on permitting? What OIRA does for regulations, this entity does for permitting. Or are you recommending that basically OMB creates a set of rules and then we function under the rules?

Mr. SHELANSKI. I think you are going to need somebody who has the accountability, who has to come in and implement legislation or implement Executive Orders, appear before you and explain what they are doing.

I might make a suggestion that OIRA is not a bad structure in which to embed that. There would need to be a new branch in OIRA with a serious SES leader who is responsible for that. I think that that could be well done, but it would require, I think, some legislative help.

The only other thing I would add is that de-duplication of regulatory jurisdiction is another way to get at both the accumulation of regulation and the overlapping permitting issues that come in there. The example you gave of USDA and FDA on food safety, I cannot tell you how many days of my life I will never get back try-

ing to manage collisions on food safety rules between two different issues. There we need some statutory help, but that is another way to get at the issue.

Senator LANKFORD. I would also tell you, I cannot name the number of projects that I have had someone in my State call me on and to say, "I am doing my third NEPA review on the same project. I was required to do it at the beginning. Then it took too long and it expired, and I am still waiting on more Federal permitting, and I had to do another one. And then we got all the way to the end of it, and they wanted another one. How many of these do I have to do for the same project?" I have heard that over and over and over again. So this issue about how do we manage the permitting is an unknown, and no one knows which agency to go to first and which one is primary in it. And is it FERC that handles that first? Is it the Corps of Engineers that handles that? Is it somebody else? Where do I go for it? That does have to be resolved.

Mr. SHELANSKI. If I could just impose for 30 seconds to give a specific example of how that might be dealt with. Right now, because of the way the statutes are written, if you have gone too long, your data has expired, and your previous authorization is no longer valid.

One thing that could be done is to shift the burden to the agency to explain why there really needs to be a new review, and then that request for a new review could be run through this hypothetical new office, wherever it is located, with the burden on the agency to justify it. That would cut down on this impossible Catch-22.

Senator LANKFORD. Would you just be then waiting for 6 months until that agency answers the question on why they do not have to do it again?

Mr. SHELANSKI. Give the agency 30 days or 60 days, or else they forgo the right to require it.

Senator LANKFORD. OK. Let me ask you a question, Mr. Shelanski, and I know I am picking on you in some of these things as well. But the implementation of rules, when they are first written, and the speed of how they are done and getting the input—Ms. Ghazal talked openly about trying to get people—and Ms. Kerrigan did as well—about trying to get people to the table to get input early, because if you get input early, once the rule is put in place, it is a better rule when it is put in place. But you also have fewer lawsuits, and it is less cost to the taxpayer and less drama as it goes through the litigation process, gets kicked out, starts all over again, and goes through everything else.

How do we avoid that? Do we have a greater need for advance notice of proposed rulemaking (ANPRM)? What do we need to do to get more input to make sure it is written correctly the first time and have fewer lawsuits on the back side?

Mr. SHELANSKI. So I would start by saying that I think the system we have in place is better than people often give it credit for. Certainly the notice and comment, the proposed rule, final rule sequence under the Administrative Procedures Act, putting aside OIRA review, I think especially when one looks at comparative systems around the world, does afford a lot more opportunity for early engagement. But what you have to make sure of—and this is

where things sometimes break down—is that the engagement is really meaningful. And, of course, your engagement is after the fact at that point. It is after an agency might have invested months or years in doing the work, and the agency will necessarily be more reluctant to change in the face of those comments.

So I do think that the notice of inquiry and the ANPRM process, especially on major rules, really can be quite helpful. And in my own view, requiring an ANPRM for major rules—and we might want to think about how to define those because 100 million in a lot of ways seems fairly low. As I like to tell people, it is the average annual revenue of just two Walmart stores. But major rules might be a place where agencies should presumptively do a notice of inquiry, presumptively do an ANPRM so that stakeholders of all kinds—and there should be, I think, a requirement that small businesses have a seat at that table, are involved early. That would cut down on litigation.

The objection that you will hear to this is that the early access will be only on one side. You will get the people who would bear the cost of the regulation, not the public that might bear the benefits. So the process would have to make sure to bring in people who will be advocating equally for the benefit side of that, and I think that is an extremely important aspect of the process. But without it being an all-the-time requirement essential mandate, I do think that a greater use and a presumptive use of ANPRM in major rules is something that could help the process.

Senator LANKFORD. I know we have been going about an hour and a half, and I want to be merciful to you in this process as well where I pull things together, and I do appreciate all of your written testimony. It is extremely helpful, and the dialogue, to be able to have it. And so thank you for submitting that. But I do want to provide one last opportunity if somebody else wanted to be able to get something on the record orally, to still be able to share that so we can get that on the record. Mr. Chambers.

Mr. CHAMBERS. Just a very cautionary note. If we look at the British Columbia experience, they initially sought to reduce regulatory restrictions—not regulations but actual regulatory restrictions—by 33 percent, and they achieved that goal within 2 years. If they were running into a situation where they were being forced to jettison rules for which the benefits exceeded the costs, one would have expected them to put the brakes on very hard at that point. But they continued that process and ultimately ended up reducing total regulatory restrictions by 43 percent.

What proportion of the CFR is red tape for which costs exceed benefits? Truly nobody knows the answer to that question at this point. But I think the idea of a hair-cutting exercise, which injects discipline into the process would be beneficial—and you like to emphasize, Senator, the value of competition. Make regulations compete against one another so that at least the underperformers can be weeded out and there is a mechanism to force that to happen. That is what I would suggest, and I think that the government needs to research this more carefully. I do not know, a panel or what entity or mechanism should do that, but I think a long and hard look is needed to try to inventory these restrictions and then try to figure out what would be a fair and appropriate level of re-

duction. The Canadians did it with interns. Mercatus is doing it with computers. You would need a lot of human interaction, obviously, to do a RAI type analysis on each one. But I think there needs to be a very close examination of that and some determination made in that regard.

Senator LANKFORD. Dr. Chambers, we will count on folks like you and some of your colleagues to be able to take a hard look at some of these things, to be able to bring us good data, and the case study of that is appearing in front of our eyes, and it is the United Kingdom (U.K.) leaving Brexit as they rewrite all of their regulations to be able to determine the difference between U.K. under European regulations and U.K. under regulations, whatever they are going to do in the days ahead to be able to figure out what happens to their economy, to poverty, to safety, to health, all those things. There will be a side-by-side that is very unique in the modern age to be able to see how the same economy functions under two different sets of regulations in the days ahead, and I look forward to a chance to see that research—not to assign you homework, but that type of project just absolutely needs to be done in the days ahead.

Anyone else need to be able to add something to end orally? Ms. Kerrigan.

Ms. KERRIGAN. Just one final thing is there is wisdom in the crowd, and we believe public engagement is an important driver of good regulatory outcomes. So one of the things that you all may want to consider, too, is to perhaps allow response comments to comments and to sort of get that interaction going. I think that would be very appropriate in the regulatory system.

And then, finally, I very strongly feel or we feel that no major rules should be issued without a plan for future review. I mean, what does success look like? How do we measure that we set out to do what we said we are going to do in this regulation, and did it achieve its intended purpose?

Senator LANKFORD. Yes, that is something that Senator Heitkamp and I have talked about often, what she calls "prospective-retrospective review," that we plan to look back.

Ms. KERRIGAN. Yes.

Senator LANKFORD. OK. Thank you. Ms. Ghazal.

Ms. GHAZAL. Just one last word on the Regulatory Accountability Act, and we cannot let the opportunity pass. So much of what we talked about today would be solved if we could just pass that, enact it. Whether it is the early engagement with we very much agree, small business, we want them. They are our customers, they are our suppliers, they are families of our employees. We want them at the table, and we think the best way is through enactment of the RAA. The same with also looking back, is the regulation doing what it intended?

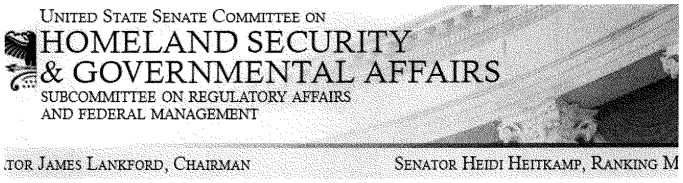
Senator LANKFORD. OK. Thank you. For all of you today, thank you again for being here and for contributing to the ongoing work that you do.

This does conclude today's hearing. The hearing record will remain open for 15 days until the close of business on October 12th for the submission of statements and questions for the record.

This hearing is adjourned.

[Whereupon, at 11:32 a.m., the Subcommittee was adjourned.]

APPENDIX



Opening Statement

Hearing Before the Regulatory Affairs

And Federal Management

Subcommittee

Thursday September 27th at 10:00 AM

Good morning and welcome to today's Subcommittee hearing titled "Examination of Regulatory Policy on the Economy and Business Growth." Today we will review how this administration's regulatory policy has influenced the economy.

As we begin this conversation, it is important to be clear that, well thought and inclusive regulations are a necessary facet of an orderly society.

Well thought out regulations brings clarity for individuals and businesses alike and provides for the safety and well-being for everyone.

Regulations are necessary to carry out the laws passed by Congress, and they must be promulgated in a careful and deliberate manner with thorough analysis done on the front end.

However, over the years through both republican and democratic administrations, there has been an onslaught of regulations that crippled many aspects of our economy. It was during these years that, a new term, "regulatory burden," was used to describe just how much regulations were affecting both small and large businesses, and the economy in general.

Like most Members of Congress, I can attest that over the years I held hundreds of meetings with constituents, not to talk about a single problematic regulation; instead, it was the cumulative effects of many regulations that caused tremendous hardships and their pleas for Congress to address this burden.

How big is the regulatory burden? As a nation, we spend nearly $2 trillion each year on regulatory compliance.

This has been a problem for too long and the burden has grown with each subsequent administration. Until this one.

This administration's regulatory policies have, in effect, stopped the regulatory onslaught that was commonplace for decades.

This administration, through various Executive Orders and policy changes, has taken significant steps to reform the administrative process.

These actions have spurred a marked increase in optimism from individuals and businesses, which has resulted in a strong and vibrant economy and lower unemployment.

According to many economists, the recent increases in Gross Domestic Product are the result of the certainty that comes through regulatory stability.

With regulatory relief, businesses have the confidence to plan for the future, re-invest in their business, and hire more employees.

While I applaud the administration's focus on breaking the cycle of piling one regulation on top of another, the Executive branch alone cannot provide long-term regulatory stability. That responsibility rests with Congress.

Businesses face uncertainty that comes from one administration to the next. This administration has very different priorities from the last one and the next administration may very well have different priorities from this one.

This drastic swinging of the pendulum needs to stop.

This committee has debated legislation that will set clear guidelines for agencies – not to dictate a particular outcome, but simply to require them to complete thorough analysis before issuing a rule.

Common sense things such as measuring the full impact of a rule, consulting with state and local governments, and listening to small business owners at all stages of the process are just a few ideas Congress needs to pass.

I'm optimistic we can find areas of agreement that Congress can act on to provide long-term regulatory stability, which in turn will add to GDP and act as a natural defense to possible economic recession.

I've called this the "nerdiest Subcommittee in the Senate" and this morning's conversation should live up to that standard.

With that, I recognize Ranking Member Heitkamp for her opening remarks.

Hearing before the Homeland Security and Government Affairs Subcommittee on Regulatory Affairs and Federal Management

September 27, 2018

"Examination of the Effects of Regulatory Policy on the Economy and Business Growth"

Testimony of Howard Shelanski

Chairman Lankford, Ranking Member Heitkamp, and members of the subcommittee:

Thank you for inviting me to testify before you today. My background as a government official, scholar, and practicing lawyer informs my perspective on the importance of a sound regulatory system for the U.S. economy and for the health and welfare of all Americans. I am currently a Professor of Law at Georgetown University and a partner in the law firm of Davis Polk & Wardwell LLP. From July 2013 through January of 2017, I served as Administrator of the Office of Information and Regulatory Affairs at the White House. In that capacity, I dealt first hand with the review of new regulations and the retrospective assessment of rules already on the books. My previous government positions include serving as Director of the Federal Trade Commission's Bureau of Economics, Chief Economist of the Federal Communications Commission, and a Senior Economist for the President's Council of Economic Advisors. From 1997 to 2009 I was on the faculty of the University of California at Berkeley, and before that I practiced law in Washington D.C. and served as a law clerk to Justice Antonin Scalia, to Judge Stephen F. Williams of the U.S. Court of Appeals, and to Judge Louis H. Pollak of the United States District Court in Philadelphia. I am the author or co-author of numerous articles and books related to antitrust and regulation.

I wish to make three points in my testimony today: (1) regulation must be done carefully, with rigorous attention to costs and benefits; (2) regulation should take account of how its costs might differ for entities of varying sizes; and (3) the same careful assessment of costs and benefits that applies to rulemaking should apply to deregulation. The criteria for any regulatory reform should be whether it advances the above three principles and whether it is neutral in its impact on the weighing of regulatory costs and benefits.

Sound regulation requires rigorous assessment of both benefits and costs

One of the signature achievements of the U.S. regulatory system over the past 40 years has been the increasingly central role of cost-benefit analysis. When President Reagan signed Executive Order 12291 in 1981, he established the process of centralized review of Executive Branch Regulations based on cost-benefit principles. EO 12291 met with a cold reception in many quarters on grounds that it would be barrier to sound policy and a one-way ratchet toward deregulation. Cost-benefit analysis of federal rules, and the

Office of Information and Regulatory Affairs (OIRA) tasked with implementing that analysis, nonetheless became firmly established. When President Clinton took Office in 1993, instead of repealing EO 12291 he revised and updated the order into EO 12866 and signed amendments to the Paperwork Reduction Act strengthening OIRA. EO 12866 remains in force to this day, affirmed and expanded by Executive Orders from Republican and Democratic administrations alike.

For purposes of this hearing, I wish to focus on two core principles of EO 12866: (1) that the benefits of any regulation must justify the costs the rule imposes on society; and (2) that agencies should regularly review the continuing effectiveness of the rules they already have on the books. For purposes of this hearing, I put aside the important questions of how well agencies have implemented these two principles and of what analytical methods agencies should use. I focus instead on why it is important that regulatory reform neither get in the way of sound assessment of costs and benefits nor put an undue thumb on the scales toward one side of that balance.

For cost-benefit analysis to be meaningful, agencies need to take both costs *and* benefits seriously. Unfortunately, polarized arguments that emphasize one of those values while ignoring the other too often characterize debates over regulation. For example, regulatory advocates have often opposed weighing quantified, economic costs against health and safety benefits. Despite occasional statements from advocates that we should never trade lives for lower social costs, however, we do it every day. A speed limit of 15 miles per hour would save thousands of lives and prevent countless injuries every year, yet society would not tolerate the costs of such a rule and no one has seriously proposed such a policy. Regulatory costs are therefore an inherent factor in societal decisions about what kinds of rules it wants. Even if there is no requirement (and there should not be) that a rule's quantifiable benefits always exceed its quantifiable costs, rigorous analysis of regulatory costs allows society to know how much it is paying for the policies and protections it chooses.

On the other side of the debate, advocates of non-regulation or deregulation sometimes focus too exclusively on the costs of a given rule, without acknowledging or accurately accounting for the very real benefits to society that would be lost. In one recent, high-profile example, then-EPA Administrator Scott Pruitt went on television to promote the EPA's planned repeal of the Obama Administration's Clean Power Plan regulations, without mentioning the predicted benefits of those rules. Fox News interviewer Chris Wallace pointed out to Mr. Pruitt that the EPA had predicted that those rules would eventually eliminate 90,000 asthma attacks, 300,000 missed school and work days, and 3,600 premature deaths each year. Mr. Pruitt offered no new analysis to refute those benefit figures and had little answer when Mr. Wallace asked him: "without the Clean Power Plan, how are you going to prevent such things?" Ignoring regulatory benefits cheats society out of sound and desirable rules.

Beyond serving as illustrative anecdotes, the above examples also hint at an important challenge for cost benefit analysis, and one to which regulatory reform should be attuned: regulatory costs are often more salient and easier to quantify than regulatory benefits. Regulatory benefits often accrue far in the future and are spread broadly across

millions of individuals. Moreover, the benefits of regulation, especially to any given individual, might be uncertain. For example, the 3600 premature deaths that the EPA predicted the Clean Power Plan rules would eliminate were an estimate from a range of possible outcomes. Any individual might reasonably be skeptical that she herself would be one of the people to live longer were emissions to be reduced—a benefit that in any case would likely seem quite remote in time. Regulatory benefits can therefore be less salient for people, and their precise level less certain, even when they are large and reasonably likely in the aggregate. Regulatory costs, in contrast, are more likely to be more salient and quantifiable. The costs of regulatory compliance are usually more measurable, more concentrated in where they fall, and more proximate in time than the benefits are. Businesses and other stakeholders are therefore more likely to have hard information about costs and strong motivation to oppose them.

The fact that businesses might have access to more quantifiable cost information and be highly motivated to push for lower costs is not a criticism—we want reliable cost information, and we want the parties with the best access to that information to have incentive to engage in the regulatory process. But the fact that costs can be more readily quantifiable and more likely to motivate stakeholder advocacy than benefits is important because it suggests that the legislative creation of new requirements for the regulatory process might not fall symmetrically on the cost and benefit sides of the ledger. Therefore, while the most important thing for regulatory reform is to ensure that it advances analysis of both costs and benefits in rulemaking, it is also important to ensure that legislation that is neutral on its face does not, in actual practice, improperly tilt the analysis of costs and benefits in a way that harms society over time.

Regulation should not disadvantage small businesses

Regulations should not presumptively exempt small businesses from compliance. When there is a strong case that an activity causes harm, that a regulation can effectively reduce that harm, and that the costs of reducing the harm are justified by the benefits, then there could be a sound basis for applying the rule to all entities that engage in the harm-causing activity. That said, the fact that aggregate benefits justify aggregate costs does not mean that the costs fall proportionately on firms regardless of size. Larger firms might well be in a better position to absorb the fixed costs of regulatory compliance than small firms, and those fixed costs might not always vary terribly much for big and small firms. A large firm might be able to absorb regulatory costs that might put a small firm out of business or at a competitive disadvantage. For small firms that might later want to enter the industry at issue, the regulatory compliance costs might be a high barrier that prevents them from coming into the marketplace.

Because small businesses are an important engine of both economic growth and economic opportunity, agencies should, to the extent possible, calibrate regulation so that it does not impede the creation and viability of small enterprises. Processes put in place to assess small business impacts should not become a rate-determining step in promulgation of a new rule, however. When a rule is well justified under the principles of the relevant statutes and executive orders, the public should get the regulatory benefits even if the

rule's applicability to properly defined small businesses might be staged, deferred, modified, or subject to additional analysis.

The same principles that apply to making new rules should apply to retrospective review or repeal of existing rules

Retrospective review of regulation is an important, but often neglected, element of a healthy regulatory system. The assessment of rules already on the books to ensure that they are still achieving their objectives, and doing so at acceptable cost, ensures accountability and prevents the accumulation of unwarranted regulatory costs. Retrospective review has been a bipartisan aspiration, and was the subject of President Obama's EOs 13563 and President Trump's EO 13777. The latter executive order puts in place a process that, if faithfully executed according to the principles expressly set forth in the text of the order, would launch a more focused and accountable process for retrospective reviews. Notably, EO 13777 specifically invokes EO 12866 and EO 13563 as documents whose principles the regulatory reform process should follow. To the extent that this means regulatory review should incorporate sound cost-benefit principles, and make use of the best-available science and economics—as those previous executive orders require—then I think EO 13777 puts retrospective review on solid ground. If benefits that justify costs are a sufficient basis for a new rule, then benefits that continue to justify costs would be equal reason to keep an existing rule on the books. The cost-benefit principles for regulation and deregulation should be generally the same.

For that reason, regulatory reforms that take the form of "one in, one out" or, as in the case of EO 13771, "one in, two out" may be in tension with sound cost-benefit analysis. If one generally believes that there are many rules whose costs exceed their benefits, then a "pay go" mandate that new rules must be accompanied by repeal of old rules makes sense. The pay-go principle then functions as a regulatory budgeting mechanism that forces agencies to do the hard work of retrospective review. If, on the other hand, rules have been well developed according to the principles of EO 12866 in the first place, a forced repeal mechanism makes little sense, and will have the effect of preventing agencies from issuing beneficial new rules and/or forcing agencies to repeal rules that are still doing good for society. There is little evidence, and indeed evidence to the contrary from previous retrospective review efforts, that there is an existing stock of costly, ineffective regulations to be readily and efficiently repealed. Moreover, to date there is to date little, generally accepted economic evidence that regulation imposes so high an aggregate economic burden on the U.S. economy that it would be better for society to forego the benefits of that regulation, and indeed a number of facts to suggest the contrary. For that reason, retrospective review should be an important, embedded feature of our regulatory system, but without mandatory outcomes that are contrary to sound cost benefit analysis.

Conclusion

Regulatory reform that reinforces the principles of the executive orders that have guided regulatory review by all administrations since President Reagan could benefit American citizens and businesses alike. There is room for regulatory reform to improve

and reinforce the principles of cost-benefit analysis and the use of the best economic and scientific information; to improve the flexibility of regulation in its application to small businesses; and to further institutionalize and advance the process of retrospective review of regulation. The challenge lies in the details, for any such reform must achieve its objectives without systematically shifting the balance against regulatory benefits, and without so burdening the rulemaking process that even clearly beneficial rules become difficult for agencies to propose and publish in an effective manner.

MERCATUS CENTER
George Mason University

TESTIMONY

THE REGRESSIVE EFFECTS OF FEDERAL REGULATION AND A ROADMAP FOR REFORM

Dustin Chambers
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Senate Committee on Homeland Security and Governmental Affairs, Subcommittee on Regulatory Affairs and Federal Management
Examination of the Effects of Regulatory Policy on the Economy and Business Growth

September 27, 2018

Good morning, Chairman Lankford, Ranking Member Heitkamp, and the members of the committee. I thank you for inviting me to testify.

My name is Dustin Chambers, and I am a professor of economics at Salisbury University and a senior affiliated scholar with the Mercatus Center at George Mason University. My research focuses on income inequality, economic growth, and the regressive effects of regulation. Any statements I make reflect only my opinion and do not necessarily reflect the opinions of Salisbury University or the Mercatus Center.

I would like to begin by thanking Chairman Lankford and Ranking Member Heitkamp for their leadership in holding this hearing focusing on the often overlooked topic of regulatory policy. I am honored to be invited to speak on the panel this morning for what I hope to be a productive discussion on regulatory reform.

My testimony today focuses on three unintended consequences of an expanding and complex body of federal regulations:

1. Regulations reduce economic growth and GDP, thereby reducing living standards for most Americans.
2. Regulations harm small business.
3. Regulations increase poverty rates and disproportionately increase consumer prices paid by the poor.

I conclude testimony by sketching a possible roadmap for reform based on the British Columbia Model. I am happy to answer any relevant questions you have to the best of my knowledge.

THE NEGATIVE IMPACT OF FEDERAL REGULATIONS ON GDP

The creation and enforcement of regulation is an important function of government. Regulations, when appropriately applied, can protect consumers from harmful products, workers from unsafe conditions, promote stewardship of the environment, and protect citizens from government excesses. Ideally,

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government regulation should concisely and clearly articulate guide rails for public and private conduct, thus establishing universally understood "rules of the game." Government regulation that extends beyond these limited and prudential functions are difficult to justify on economic grounds, and can act as a drag on economic growth.

As long as ago as 1979, Milton Friedman openly speculated that declining US productivity was due in part to rising federal regulation. Lacking a precise measure of regulation, Friedman, like many observers, used page counts in the *Federal Register* as an indirect measure of the pace of annual regulatory growth. In 1936, its inaugural year, the Register comprised a mere 2,599 pages. Just 30 years later, the 1966 *Federal Register* had expanded to 16,850 pages, a 6.4 percent average annual growth rate over the period.[1] By 2016, the page count in the *Federal Register* reached its zenith, peaking at 95,894 pages, a 3.5 percent average rate of annual increase over the half century since 1966. In 2017, the page count of the *Federal Register* shrank to 61,950 pages, still a large number by any standard, but the slimmest volume since 1993.[2]

The *Federal Register* is a crude proxy for federal rule rulemaking because it contains proposed new rules and rule rollbacks and because rules vary in length. Consequently, regulation researchers began using page counts in the *Code of Federal Regulations* (CFR) which codifies the total stock of federal regulation. A 2013 study using this improved measure of total regulation to estimate the effect of federal regulation on physical capital, labor, US productivity, and ultimately GDP, concluded that federal regulations reduced the annual rate of US economic growth by 2 percentage points between 1949 and 2005, and that the cumulative loss of output between 1949 and 2011 equaled a staggering $38.8 trillion.[3]

While an improvement over the *Federal Register*, the use of page counts in the CFR suffers from many shortcomings. First, page counts are an imprecise measure of total regulatory rules. Second, and more importantly, total measures of regulation do not tell researchers the industries to which the regulations apply. Ideally, regulation counts should be matched by industry so that we can trace the impact of rule changes with more microeconomic granularity. This became possible through the use of computers and machine learning, resulting in the release of RegData 1.0 in 2012.[4] Prior to RegData, anyone seeking to manually analyze a single year of the CFR would have to read a volume of pages that, when laid out end to end, spans over 20 miles and contains nearly 104 million words. For a full-time employee reading 250 words per minute, this is a 3.3 year task.[5] The latest version of RegData (version 3.0) has identified just under 1.1 million regulatory restrictions and probabilistically matched these restrictions to industries up to the 6-digit North American Industrial Classification System (NAICS) code level.[6] Using this treasure trove of new data, researchers have begun to more accurately estimate the impact of regulations on GDP, small businesses, consumer prices, and poverty.

A 2016 research study using RegData found that regulations trimmed about 0.8 percentage points from the annual rate of US economic growth between 1977 and 2012.[7] To put this finding into perspective, if

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[1] Milton Friedman and Rose Friedman, *Free to Choose* (New York: Harcourt, 1979).
[2] Clyde Wayne Crews, "Trump Regulations: Federal Register Page Count Is Lowest in Quarter Century," *Competitive Enterprise Institute*, December 29, 2017.
[3] John W. Dawson and John J. Seater, "Federal Regulation and Aggregate Economic Growth," *Journal of Economic Growth* 18, no. 2 (2013): 137–77.
[4] QuantGov, "The History of RegData," accessed September 20, 2018, https://quantgov.org/regdata/history/.
[5] QuantGov, "The QuantGov Regulatory Clock," accessed September 20, 2018, https://quantgov.org/charts/the-quantgov-regulatory-clock/.
[6] Patrick A. McLaughlin and Oliver Sherouse, "RegData 2.2: A Panel Dataset on US Federal Regulations," *Public Choice*, Online First Articles (2018): 1–13, https://link.springer.com/article/10.1007%2Fs11127-018-0600-y.
[7] Bentley Coffey, Patrick McLaughlin, and Pietro Peretto estimated the effect of federal regulations using a 22-industry model of the US economy. See Bentley Coffey, Patrick A. McLaughlin, and Pietro Peretto, "The Cumulative Cost of Regulations" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016).

the total number of regulations had been frozen between 1980 and 2012, the US economy would have been $4 trillion (or 25 percent) larger in 2012 than what we actually experienced. In per capita terms, the lost output in 2012 alone equaled just under $13,000. Both of the foregoing studies,[8] despite using very different measures of regulation and very different models of the US economy, reach very similar conclusions: regulations produce a serious drag on economic growth rates resulting in very large losses in cumulative output over the long run. Even deceptively small reductions in the rate of economic growth, when compounded over several decades, have a profound impact—this is reflected in the quote often attributed to Albert Einstein describing compound interest as the most powerful force in the universe. Indeed, if the long-run rate of real economic growth, which averaged 3.2 percent between 1947 and 2018, were to be increased by 0.8 percentage points (from 3.2 percent to 4.0 percent), the resulting fast-growth US economy would be just over twice as large as our slower growing economy in a century. Such profound growth will likely do more for to eliminate absolute poverty than any well-intentioned government program.

THE NEGATIVE IMPACT OF FEDERAL REGULATIONS ON SMALL BUSINESSES

Although the overall cost of regulations is substantial, there is new and disturbing evidence suggesting that smaller businesses shoulder a disproportionate share of the compliance costs borne by private industry.[9] Regulation reduces both employment growth and total new firm creation at the industry level. Specifically, a 10 percent increase in federal regulations is associated with a 0.47 percent reduction in new firm formation and a 0.63 percent reduction in new hires. Interestingly, when controlling for firm size, this effect is only statistically significant for small firms. Moreover, the rate of large firm deaths (i.e., failures or exits) actually *declines* in response to rising regulation, suggesting that large firms are better suited to survive the pressures of higher regulation. In a similar study published this year (2018),[10] I, with my coauthors, find that rising regulations have a disparate impact on small businesses within an affected industry. In particular, a 10 percent increase in federal regulations is associated with a 0.5 percent reduction in total small firms, while the impact on large firms is statistically insignificant. Moreover, consecutive years of rising regulation within an industry has a compounding effect, wherein the negative effects of higher regulations are amplified if preceded by one or two years of above-average regulation growth. For example, a 10 percent increase in industry regulations, if preceded by two years of above average growth in regulations, is associated with a 1 percent decline in the total number of very small firms (firms with fewer than five employees).

It is reasonable to suspect that large firms can more easily afford to hire compliance-related personnel (e.g., lawyers and accountants) and spread the resulting compliance costs over a larger volume of output than small firms and especially sole proprietorships (where compliance burdens fall squarely on owners). This may hasten the exit of some entrepreneurs or deter the entry of new firms. Unfortunately, many policymakers mistakenly assume that small businesses are not harmed by regulation due to small business exemptions. Despite Congressional efforts like the Regulatory Flexibility Act of 1980 and the Small Business Regulatory Enforcement Fairness Act of 1996, small businesses still must spend time and money reviewing new rules to determine if those rules apply to their business, and if so, apply for exemptions or waivers, which still must be granted by regulators. Researchers who have studied this issue have found that small business concessions vary greatly by regulatory area and that their overall effectiveness is mixed.[11]

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[8] Dawson and Seater, "Federal Regulation and Aggregate Economic Growth"; Coffey, McLaughlin, and Peretto, "The Cumulative Cost of Regulation."

[9] James Bailey and Diana Thomas, "Regulating Away Competition: The Effect of Regulation on Entrepreneurship and Employment" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2015).

[10] Dustin Chambers, Patrick A. McLaughlin, and Tyler Richards, "Regulation Entrepreneurship, and Firm Size" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2018).

[11] For small business concessions by regulatory area, see Ryan Keefe, Susan Gates, and Eric Talley, "Criteria Used to Define a Small Business in Determining Thresholds for the Application of Federal Statutes" (Working Paper, RAND Corporation, Santa

THE REGRESSIVE EFFECTS OF FEDERAL REGULATIONS

Furthermore, businesses located in poorer areas tend to be smaller than those located in more affluent areas,[12] implying that any disparate negative effects of regulations are likely to be amplified in the most economically vulnerable communities. In a recent study,[13] I, with my coauthors, find that more federal regulations are associated with higher poverty rates at the US state level. Specifically, we find that a 10 percent increase in the federal regulatory burden on a state is associated with a 2.5 percent increase in the state poverty rate. Unfortunately, the regressive effects of federal regulations also harm poorer households in the form of higher consumer prices.

In another 2018 study,[14] we combined regulation data from RegData with consumer expenditure and pricing data from the Bureau of Labor Statistics, and estimated that a 10 percent increase in federal regulations is associated with a 1 percent increase in consumer prices. Although this result is predictable, as regulatory compliance is costly and firms will attempt to pass these costs onto consumers in the form of higher prices, we also determined that the poorest households (those in the bottom 20 percent of the income distribution) spent on average a larger share of their income on the 25 most heavily regulated goods than any other income group. Not surprisingly, these poor households faced an average inflation rate of 2.46 percent per year, far higher than the 2.08 percent average inflation rate experienced by households in the top 20 percent of the income distribution. These findings are particularly disturbing given that one of the principal goals of government regulation is the protection of vulnerable populations. Well-designed and appropriate regulations notwithstanding, this result underscores the need to reduce unnecessary red tape from the body of administrative law.

A ROADMAP FOR REFORM: THE BRITISH COLUMBIA MODEL

The United States needs to achieve lasting reform without radical policy reversals between administrations. Fortunately, the regulatory reform undertaken in the Canadian province of British Columbia in 2002 provides a roadmap for US policy makers.

Following the election of a reformist government in 2001, British Columbia (BC) sought to reduce the number of regulatory requirements, which initially stood at just over 382,000, by an ambitious 33 percent.[15] To achieve this goal, two regulatory restrictions were to be removed for every new rule imposed. Once the target reduction of one-third was achieved, the policy switched to a one-in-one-out rule. All newly proposed regulatory rules were required to be "necessary, outcome-based, transparently developed, cost-effective, evidence-based, and support[ive of] the economy and small business."[16] The reform process was decentralized, and each agency was tasked with achieving the mandated regulatory goals. The BC government successfully engaged with private individuals and firms to help identify ineffective and burdensome rules. Finally, and perhaps most importantly, the BC government successfully changed the culture of its own bureaucracy by shifting the focus of regulators' energy from the drafting of new rules to the ongoing management of a regulatory portfolio. Such an approach not only institutionalizes reform efforts, but also ensures that (1) regulators must constantly reevaluate past regulatory rules and eliminate poor performers, and (2) regulators cannot create new rules unless their

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Monica, CA, August 2005); for the effectiveness of small business concessions, see Dixon et al., "The Impact of Regulation and Litigation on Small Business and Entrepreneurship" (Working Paper, RAND Corporation, Santa Monica, CA, February 2006).

[12] Kugler et al., *Entrepreneurship in Low-Income Areas* (Washington, DC: US Small Business Administration, September 2017).

[13] Dustin Chambers, Patrick A. McLaughlin, and Laura Stanley, "Regulation and Poverty: An Empirical Examination of the Relationship between the Incidence of Federal Regulation and the Occurrence of Poverty across the States," *Public Choice* (forthcoming).

[14] Dustin Chambers, Courtney Collins, and Alan Krause, "How Do Federal Regulations Affect Consumer Prices? An Analysis of the Regressive Effects of Regulation," *Public Choice* (forthcoming).

[15] For a detailed description of the British Columbia Model, see Laura Jones Cutting Red Tape in Canada: A Regulatory Reform Model for the United States (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, 2015).

[16] *Cutting Red Tape in Canada: A Regulatory Reform Model for the United States* (Arlington, VA: Mercatus Center at George Mason University, 2015).

net benefits (i.e. benefits net of costs) exceed the performance of the least effective current rule, which is initially a weaker standard than a simple cost-benefit test when "red tape" remains, but gradually transitions into a stricter standard once regulators have effectively eliminated all "red tape."[17] Economist Laura Jones reports that following the implementation of these reforms, BC reduced regulatory requirements by 37 percent, the number of business incorporations rose while the number of business bankruptcies declined, and the province's rate of economic growth went from below average before the election of reformers (1992 to 2000) to above average in the six years after reform (2002 to 2008), all without adverse effects on environmental quality.[18]

CONCLUSION

In view of the unintended consequences of excessive red tape, which include lower rates of economic growth, reduced small business formation and entrepreneurship, higher rates of poverty, and higher prices for all consumers (especially the poorest), the nonpartisan and urgent need for regulatory reform that slashes red tape while preserving rules that protect workers, consumers, and the environment should be apparent. Moreover, the ability to stimulate the economy without impacting the federal budget or the national debt through increased spending or tax cuts is especially appealing.

ATTACHMENTS (2)

Dustin Chambers, Patrick A. McLaughlin, and Tyler Richards, "Regulation, Entrepreneurship, and Firm Size" (Mercatus Working Paper)
Dustin Chambers, Patrick A. McLaughlin, and Laura Stanley, "Regulation and Poverty: An Empirical Examination of the Relationship between the Incidence of Federal Regulation and the Occurrence of Poverty across the States" (Mercatus Working Paper)

[17] This is an especially important property given recent research, which calls into question the quality of regulatory impact analysis (RIA) performed by federal agencies. See for example, Jerry Ellig, "Evaluating the Quality and Use of Regulatory Impact Analysis: The Mercatus Center's Regulatory Report Card, 2008–2013" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016).
[18] See Jones (2015).

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Regulation, Entrepreneurship, and Firm Size

Dustin Chambers, Patrick A. McLaughlin, and Tyler Richards

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Dustin Chambers, Patrick A. McLaughlin, and Tyler Richards. "Regulation, Entrepreneurship, and Firm Size." Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2018.

Abstract

We investigate whether regulatory growth disproportionately burdens small businesses relative to large businesses. Using panel data from RegData 3.0 and exploiting variation across industries over time, we empirically estimate the relationship between regulatory growth and growth in the number of small and large firms. Controlling for other factors, we find that a 10 percent increase in regulatory restrictions on a particular industry is associated with a reduction in the total number of small firms within that industry by about 0.5 percent, while simultaneously having no statistically significant association with the number of large firms in that industry. We also find that these magnitudes are amplified when this regulatory growth follows previous years of high regulatory growth, implying that unrelenting regulatory increases harm small businesses at an escalating rate.

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This paper can be accessed at https://www.mercatus.org/publications/regulation-entrepreneurship-firm-size

Regulation, Entrepreneurship, and Firm Size

Dustin Chambers, Patrick A. McLaughlin, and Tyler Richards

1. Introduction

Regulations, by their nature, generate costs and benefits for the entities they affect. These effects can accrue in different ways and to different groups. Some of the effects are estimated in regulatory impact analyses prepared by the agencies responsible for the regulations. However, as regulations build up over time, their accumulation may have more significant effects than agencies are able to impute in their analyses of individual rules. Furthermore, the effects of accumulation may impact some groups more than others because of certain group characteristics. In this paper, we focus on discovering whether increases in regulations disproportionately burden small businesses as compared with large businesses. In particular, we seek to determine whether increases in regulations that apply to individual industries reduce the number of small firms in those industries, while having less of an effect on their larger competitors.

Regulatory costs come in many forms, but a common manifestation is compliance costs—the costs that businesses must incur in order to fulfill regulatory obligations. Compliance costs might include filling out paperwork, purchasing new equipment to meet mandated standards, or paying lawyers to advise on compliance strategies, just to name a few examples. Such compliance activities may have economies of scale that allow large businesses to navigate the regulatory landscape more easily than small businesses. For instance, large businesses are likely to have lawyers on payroll, while small businesses may be limited to contracting for legal services. Not only is the same legal advice likely to cost more from a contractor than from a full-time hire, but the contracted lawyer must spend extra time learning the specific details of the business—knowledge a lawyer on payroll would already have when compliance issues arise.

Moreover, the costs of many regulations are fixed rather than purely variable (per-unit) costs, and larger businesses are able to spread fixed costs over a larger volume of output. In other words, if regulations apply equally to all businesses within an industry, we should expect that the relative costs of compliance—meaning the costs relative to the size of the business—will be larger for small businesses than for large businesses.

If the burden of regulations falls disproportionately on small businesses, this burden is likely to have ripple effects throughout the economy owing to the importance of small businesses for employment, innovation, and economic opportunity. Small businesses represent a large portion of the US economy, both in terms of the number of businesses and in terms of the workforce. According to the US Census Bureau's "Statistics of US Businesses" (SUSB), businesses with fewer than 500 employees—the definition of a small business used by the Small Business Administration (SBA)—account for 99.7 percent of US businesses and 47.5 percent of US employment (SBA 2017). Furthermore, research has shown not only that small businesses exhibit roughly the same rate of innovative activity per worker as large businesses, but that in some industries small businesses are more innovative than their larger counterparts (Audretsch 1995).

In addition to these macroeconomic implications, the burden of regulatory costs on small businesses may also have important distributional effects based on income. Low-income areas tend to have smaller businesses than other areas (Kugler et al. 2017), meaning that any disproportionately high costs for small businesses are likely to hit these low-income areas hardest. Small businesses are also an important mechanism for economic mobility, specifically for low-income households with little access to capital. To the extent that regulations hurt small businesses or create barriers to entry for such businesses, they may also limit the economic opportunities available to low-income households.

In order to mitigate these potential problems, Congress has built some relief mechanisms for small businesses into the regulatory process. For example, the Regulatory Flexibility Act of 1980 and the Small Business Regulatory Enforcement Fairness Act of 1996 instruct federal agencies to attempt to determine a regulation's economic impact on small entities and explore alternatives that might reduce that impact, including partial or total exemptions for small businesses (although these statutes allow the agency to determine what constitutes a small business under the specific circumstances). However, we know little beyond limited anecdotal evidence about the extent of small business exemptions or their characteristics, because there currently exists no way to scour the federal regulatory code for all exemptions and their details. Furthermore, exemptions that do exist may not constitute complete cost savings—some are only partial exemptions, and even full exemptions may involve compliance costs because businesses must determine whether they are eligible for the exemptions and must file for them.

The idea that regulatory burdens may fall disproportionately on small businesses is not new to the academic literature. However, limited data on the breadth and incidence of federal regulation have made empirical testing of the concept difficult at best. A few studies have attempted to look at the general effects of regulations on small businesses (Hopkins 1995; Crain and Hopkins 2001; Kitching, Hart, and Wilson 2015; Crain and Crain 2014), and others have analyzed specific case studies or anecdotes (Adler 1993; Becker 2005; Dean, Brown, and Stango 2000). While these studies are informative, the robustness of their results is debatable because they either lack a good measure of the incidence of regulation or require extrapolating to the entire economy from a single industry. However, a novel database called RegData, which quantifies federal regulatory restrictions within the *Code of Federal Regulations* (CFR) and identifies the industries those restrictions directly impact, allows us to empirically test the effects

of regulations on small businesses with more granularity and robustness (McLaughlin and Sherouse 2017).

This study is the first to estimate how changes in the stock of regulations influence the number businesses of varying sizes across industries. In particular, we evaluate how increases in the number of regulatory restrictions that apply to individual industries affect the number of small firms and large firms in those industries between 1998 and 2015. We also evaluate the effect of increases in regulatory restrictions during that time period on total employment in small and large firms from those industries. Controlling for other factors, we find that a 10 percent increase in regulatory restrictions on a particular industry is associated with a reduction of 0.432–0.565 percent in the total number of small firms in that industry, but the same increase is not associated with any change in the number of large firms in that industry. The reduction in small firms rises to 1.00–1.54 percent when the industry has experienced above-average regulatory growth over the previous two years. We also find that a 10 percent increase in regulatory restrictions on an industry is associated with a 0.410–0.547 percent reduction in total employment within small firms in that industry. However, when industries endure two consecutive years of above-average regulatory growth, we find statistically significant reductions in employment for firms of all sizes within that industry, including large firms.

This paper is organized as follows. Section 2 provides a review of the existing literature on the effects of regulations on small businesses. Section 3 describes the data used in the study. Section 4 provides exploratory analysis of the differing effects of regulations on small and large businesses. Section 5 describes the formal regression model. Section 6 presents the estimation results. Finally, section 7 concludes with a discussion of the topic and results.

2. Literature Review

Our study is the first in the literature to address how changes in the stock of regulations influence the number of businesses of different sizes across industries. The lack of existing research likely reflects the fact that, before RegData, there existed no comprehensive panel of federal regulatory restrictions that was based on the North American Industry Classification System (NAICS). Consequently, the bulk of the existing literature focuses on either the general impact of federal regulations on all small businesses or industry-specific case studies. General studies risk conflating the effects of other factors with those of regulations, and case studies paint only part of the picture. Moreover, much of the literature on small businesses and regulation has relied on surveys of small business owners, who are asked to give potentially biased feedback concerning the monetary and time burdens of compliance.

Nevertheless, a large body of research exists on whether and how regulations affect small businesses. Bradford (2004) develops a mathematical model of how regulatory costs and benefits affect businesses of different sizes, with the aim of determining whether small business exemptions are justified. However, he falls short of providing a general answer to that question owing both to uncertainty about the compounding effects of many regulations and to case-by-case considerations regarding transaction costs. Becker (2005) presents a case study of asymmetric enforcement of the Clean Air Act, which exempts small businesses from many regulations. He finds that many asymmetries exist in enforcement, some favoring small businesses and some favoring large businesses. Thus, he is unable to draw any conclusions regarding whether regulations favor small businesses specifically. Dean, Brown, and Stango (2000) conduct a different study on the effects of environmental regulations on small businesses,

finding that greater intensity of regulation is associated with fewer small business formations but no change in large business formations.

Crain and Crain (2014), looking at the costs of regulations for small businesses, measure regulatory cost incidence by evaluating the cost of regulatory compliance for various industries and determining the cost per employee for small businesses (those with fewer than 50 employees), medium businesses (50 to 99 employees), and large businesses (100 or more employees). They find that, across all industries, the compliance cost per employee is $11,724 for small businesses, $10,664 for medium businesses, and $9,083 for large businesses. The National Federation of Independent Business (NFIB), a US association of small businesses, provides some insight into the costs as perceived by small business owners. The association recently released the results of a questionnaire in which it asked its members to rate 75 potential business problems related to the marketplace and government activities on the basis of each problem's severity. "Unreasonable government regulations" was rated the second-most-severe problem, trailing behind only the cost of health insurance (Wade 2016).

Kitching, Hart, and Wilson (2015), however, suggest that by treating regulation as a static and negative influence (e.g., by considering only the one-time costs of purchasing new technology or filling out paperwork), small business owners and much of the existing literature overlook the positive effects of regulation on business performance. They argue that regulation is in fact a dynamic force that can benefit or harm businesses as they adapt to the new regulations and interact with stakeholders, but that the dynamic effects (including the benefits) may be less apparent than the static effects. These dynamic effects include changes such as new opportunities created by the adoption of new mandated business practices and technologies and entrepreneurial opportunities created by changes in the market structure due to regulatory effects.

Regarding the cumulative costs of regulations, Bradford (2004, 28) argues that they may be less than the sum of the individual (marginal) costs of compliance with each regulation. This stems from the fact that some regulations overlap:

> For example, one of the costs of the Americans with Disabilities Act is training a firm's hiring personnel, who must learn what hiring practices are disallowed by the Act. The Equal Employment Opportunity Act imposes a similar cost, but with respect to women and minorities rather than the disabled. To the extent that personnel training for the two statutes can be combined, the overall training cost may be less than what it would cost to train people under each statute separately. Paperwork and labeling requirements may involve similar economies.

Thus, Bradford argues that the cumulative costs of regulations are increasing at a declining rate. This is in sharp contrast to Adler (1993), who argues that regulations have a compounding effect on costs:

> The problem is not so much with any specific regulation as it is with the overall phenomenon. . . . The cumulative impact of regulatory efforts is to depress economic activity, retard job creation, and stifle the entrepreneurial spirit. When regulations are issued with little regard for their marginal impact when added to existing requirements, their results can be particularly oppressive. Regulations are like straws that eventually break the camel's back.

Nonetheless, both authors predict that the total regulatory burden is not simply the sum of the compliance costs projected by regulatory agencies, but rather a function of the buildup of regulations over time. Neither author, however, addresses the two central questions of our paper: First, does the pace of short-run changes in federal regulations differentially impact the number of small and large firms within an industry? Second, how do these changes impact total employment for small and large firms within an industry? Thus, our paper advances the literature in several key ways. First, we look at the impact of regulatory flow rather than the overall level of regulation. Second, we examine enterprises of all sizes, not just small businesses. Finally, we use objectively generated and unbiased measures of regulation to estimate effects over nearly two decades (1998–2015).

3. Data

For our measure of federal regulation, we use RegData 3.0, which quantifies regulation from the CFR for the years 1970–2016 (McLaughlin and Sherouse 2017). To obtain this measure, RegData first searches the CFR for restrictive words, such as "shall" or "must." It then uses a machine learning model to assign probabilities that an industry is likely to be affected by each restriction. These industries are identified using NAICS industry codes (Al-Ubaydli and McLaughlin 2017). The model is trained to identify industries by looking for textual similarities between a rule in the CFR containing specific restrictions and a set of rules and proposed rules published in the *Federal Register* that mention at least one NAICS industry by name. RegData identifies these industries from the two-digit to six-digit NAICS levels, with two-digit being the broadest (e.g., 23—Construction) and six-digit being the narrowest (e.g., 238140—Masonry Contractors).

We combine the data from RegData with the SUSB data, which provide the number of firms and total employment for businesses of various sizes within NAICS industries each year from 1998 to 2015.[1] SUSB defines a firm as "a business organization consisting of one or more domestic establishments in the same state and industry that were specified under common ownership or control."[2] It defines size by the number of employees, grouping businesses into six categories: 0–4, 5–9, 10–19, 20–99, 100–499, and 500+ employees. SUSB also identifies industries from the two-digit to six-digit NAICS level, allowing for direct mapping to the RegData database. It is important to note that firms can move between categories over time for

[1] We chose SUSB over County Business Patterns for two reasons: (1) SUSB has data at the firm and establishment levels, while CBP has data only at the establishment level (which means its data give a less accurate picture of the total number of "businesses"); and (2) the Census Bureau recommends that County Business Patterns data not be used as a time series.
[2] See the SUSB glossary at https://www.census.gov/programs-surveys/susb/about/glossary.html.

various reasons—for instance, they might hire additional workers, lay workers off, or merge with other firms. That said, firms only exist in a single category each year.

Table 1 (page 33) provides the distribution of firms by size and year in the US between 1998 and 2015, as reported by SUSB. Over this time period, very small businesses (0–4 employees) constituted the bulk of all firms (61.21 percent), while all small firms (0–499 employees), as defined by the SBA, represented more than 99 percent of all firms. Large firms (with 500 or more employees) represented less than one-third of one percent of all firms. Nonetheless, large firms were important sources of overall employment. Table 2 (page 34) provides the distribution of employment by firm size between 1998 and 2015, as reported by SUSB. Over this time period, large firms provided just under 51 percent of total employment, while all small firms (0–499 employees) provided the other 49 percent. The smallest firms (0–4 employees) provided approximately 5 percent of all employment.

In the regression analysis that follows in section 5, we match the RegData data and SUSB data with two indicators of the US business cycle: the unemployment rate and the US GDP gap. The unemployment rate, obtained from the St. Louis Federal Reserve, measures the US average rate of unemployment from 1998 to 2015 (OECD 2018). The GDP gap is a measure of how far the current level of US output is above or below its long-run trend. This measure is derived from annual real GDP data obtained from the St. Louis Federal Reserve (BEA 2018) and is decomposed into trend and cycle components.[3] The latter series (cycle) is interpreted to measure economic deviations from trend—that is, the business cycle (in billions of 2009 chained dollars). Finally, we divide the cycle series by the trend measure to express the GDP gap as a percentage of full output.

[3] Because this is annual data, the smoothing parameter was set to 6.25 ($\lambda = 6.25$).

For example, a positive value of 2 percent corresponds to economic output that is 2 percent above trend output (an economic expansion), while negative readings correspond to recessions.

4. Exploratory Analysis

Before specifying and estimating the formal regression model, it is instructive to examine the data directly to find evidence of patterns within and relationships between the variables in our dataset. We begin by looking at the year-over-year rate of growth of industry-specific regulations, which averaged 3.83 percent between 1998 and 2015. This growth rate, while high, varied significantly by year (see table 3, page 35), with regulatory growth exceeding 5 percent per year on four occasions (2004, 2008, 2012, and 2015).

Moreover, we find that the burden of regulation falls disproportionately on smaller businesses. To explore this further, we use the SUSB firm size classifications to calculate the effective regulatory restrictions by firm size and year using weights based on the proportion of firms of a given size within an industry. For example, focusing on the smallest firms (0–4 employees), for each year (t) we first calculate the total number of small firms (F_t^{0-4}) in our dataset:

$$F_t^{0-4} = \sum_i F_{t,i}^{0-4}, \tag{1}$$

where i is an index of industry and $F_{t,i}^{0-4}$ is a measure of the number of small firms in industry i in year t. Next, we derive weights based on the share of all small firms that operate in a given industry, which reflects the distribution of small firms across industries:

$$w_{t,i}^{0-4} = \frac{F_{t,i}^{0-4}}{F_t^{0-4}}. \tag{2}$$

For example, in 1998, there were 5,400,968 firms with 0–4 employees in our matched dataset. Of those small firms that year, 198,580 were in the wholesale trade sector (NAICS code

42). Therefore, the share ($w_{t,i}^{0-4}$) of all small firms in the wholesale trade sector in 1998 equaled approximately 3.7 percent (i.e., 198,580/5,400,968 = 0.03677). Finally, we multiply these annual industry weights by the level of federal regulation that pertains to each industry (reg_{it}), and sum across industries:

$$reg_t^{0-4} = \sum_i w_{t,i}^{0-4} \cdot reg_{it}. \quad (3)$$

Repeating this process for each firm size classification (i.e., 5–9 employees, 10–19 employees, etc.), we derive the weighted regulatory restrictions by firm size for each year (see table 4, page 36).[4] The resulting data enable us to determine whether regulatory restrictions tend to be higher in industries that have a higher concentration of small firms. The resulting regulation total represents the universe of regulations collectively faced by firms of a given size in a given year. Therefore, it is important to emphasize that no single firm faces the totality of these weighted restrictions, but rather this is a measure of regulation brought to bear collectively on all firms of a given size.

We find that the smallest firms, defined as enterprises with four or fewer employees, faced a regulatory burden between 19 and 83 percent greater than that of their larger counterparts in 1998. By 2015, this imbalance had declined somewhat, but was nonetheless large, ranging from 15 to 48 percent. To show this more clearly, figure 1 (page 37) plots an index of weighted

[4] The drop in weighted regulations across all firm size classes between 2002 and 2003 was due to a change in Census Bureau methodology in the tabulation of SUSB statistics. Specifically, 2002 was the last year in which the 1997 NAICS code system was used. Beginning in 2003, SUSB switched to the 2002 NAICS code system, resulting in the loss of 43 sectors in our dataset and the addition of 195 new sectors. The Census Bureau updated the underlying NAICS code system again in 2008 and in 2012, but the updates resulted in few sectoral changes in our matched dataset, with net total firm changes of less than 1.5 percent in both transition years.

regulation by firm size, with 100 corresponding to the level of regulation faced collectively by small firms in 1998 (25,633 weighted regulatory restrictions).[5]

There is also anecdotal evidence that federal regulations have a more erosive effect on small firms than on larger firms. Figure 2 (page 38) plots an index of total small firms (100 corresponds to the total number of small firms in 1998) against the index of weighted regulations for small firms from figure 1 (100 corresponds to the level of regulation faced by small firms in 1998) from 2003 to 2015.[6] These results are intriguing even though the relationship between the *level* of small-firm entrepreneurship and federal regulations is beyond the scope of this paper.[7] Specifically, there appears to be an inverse relationship between total firms and total weighted regulations, with the two series often moving in opposite directions (i.e., the total number of firms tends to fall during periods of regulatory buildup, while entrepreneurship increases during periods of deregulation).

Granted, the first few years of the 21st century were a period of high growth followed by contraction (the Great Recession) and slow recovery; therefore one cannot credit regulations alone with the pattern of total small firms observed. However, it is worth noting that a similar pattern *does not* emerge when examining large firms with 500 or more employees (see figure 3, page 39). Despite a recession and surge of regulation, the pattern of growth for large firms is

[5] These measures do not take into account small business regulatory waivers, which exempt some small businesses (on a case-by-case basis) from specific regulations. Data about these waivers are not readily available, and regulations are costly irrespective of waivers. First, firms must stay apprised of, analyze, and understand all new regulations affecting their industry. Second, the costs of applying for a waiver (e.g., legal, consulting, and filing costs) may be substantial. Therefore, all applicable regulations are costly to firms, regardless of their enforcement.
[6] We plot from 2003 onward because of the change in SUSB methodology between 2002 and 2003 discussed above.
[7] Testing the relationship between the stock (or level) of firms and regulations would be an ambitious undertaking, as it would require the construction of a model that mimics the distributional structure of the US economy. Instead, in section 5, we test the relationship between growth in the total number of firms in a given industry and growth in federal regulations germane to that industry. This flow model necessarily eliminates any static or slow-evolving structural factors governing firm size and distribution, yielding a model wherein growth in total firms is driven by regulatory changes and the business cycle.

very different. While this may seem puzzling to some, it does fit a pattern consistent with the predictions of public choice theorists (see, for example, Stigler 1971 and Peltzman 1976, among others), who posit that large and more powerful firms often seek regulations, which act as barriers to entry to the industry by smaller firms, and so limit competition to existing firms. This pattern is also consistent with the theory that larger firms both possess the resources to cope with new regulations and can spread the costs of regulations over a larger volume of output.

To show the extent to which weighted regulations are correlated with the number of firms of a given size, table 5 (page 40) provides the relevant correlation coefficients over the periods 2003–2015 and 2009–2015.

Given the sharp economic contraction of the Great Recession followed by the brisk pace of new regulation during the Obama administration, one would expect, a priori, a negative correlation between total firms and regulation. We do observe this pattern quite clearly in smaller firms (with fewer than 100 employees). However, large firms display the opposite behavior, with surging numbers of large firms alongside higher regulations.

To further explore this issue, we set aside the total weighted regulation data by year and instead investigate the unweighted, industry-level regulation and firm data. As a first step, we calculate the year-over-year growth rate of the total number of firms of a given category size (e.g., 5–9 employees) between 1998 and 2015. Next, we group these growth observations by their corresponding *rate of regulatory growth*. Observations from industries experiencing the relatively lowest rates of regulatory growth within a given year (i.e., the bottom 25 percent) are assigned to the low-regulation-growth group, while observations from industries experiencing rapid regulatory growth within a given year (i.e., the. top 25 percent) are assigned to the high-regulation-growth group. Next, we subdivide the low-regulation-growth group by size class and

calculate the average growth rate in the total number of firms. This step is repeated for the high-regulation-growth group. The results are plotted in figure 4 (page 41). Clearly, the total number of firms in industries with regulatory stability grew at a higher pace (or shrank at a slower pace) than the number of firms in industries deluged by new regulations. This suggests that firms operating in an environment with little regulatory growth are less likely to fail than their peers doing business in an environment with rapidly increasing regulations.

As a final exploratory exercise before moving to the formal regression model, we ask this question: If firms within an industry are subjected to several consecutive years of growing regulatory burden, does the number of firms within that industry decline at a faster pace? To assess this question, we filter our dataset to include firms that experienced one, two, or three consecutive years of regulatory growth. Focusing specifically on the smallest firms (0–4 employees), we find that both total firms and employment decline more rapidly with more consecutive years of regulatory growth (see figure 5, page 42).

Moreover, this phenomenon is exacerbated when the rate of regulatory growth is higher. To demonstrate this, we repeat the exercise above, but this time focus on consecutive years of *above average* regulatory growth. The results for the smallest firms are similar but noticeably more pronounced (see figure 6, page 43). In the case of a single year of positive regulatory growth, the corresponding total number of small firms within an industry shrinks by about 0.31 percent (see figure 5). However, when firms experience a single year of above-average regulatory growth, the total number of small firms shrinks by 1.11 percent, which is over 3.5 times the 0.31 percent rate of decline. To put this number into perspective, there were more than 3.6 million firms with 0–4 employees in 2015. A decline of just 0.31 percent represents the loss of more than 11,000 firms. When regulatory growth extends to three consecutive years, the

impacts are more pronounced: the corresponding total number of small firms within an industry shrinks by about 0.42 percent annually (see figure 5). However, when firms experience three consecutive years of above-average regulatory growth, the total number of small firms shrinks 3.5 times more rapidly (1.47% vs. 0.42%). If such a drastic decline were to befall all very small firms in 2015, the result would be the loss of more than 53,000 businesses.

Turning to the employment statistics of the smallest firms, a single year of positive regulatory growth is associated with a 0.02 percent decline in employment, while three consecutive years of regulatory growth is associated with a 0.19 percent decline in employment each year (see figure 5). To put this into perspective, nearly 5.9 million people were employed by small firms in 2015. A decline of just 0.19 percent would represent the loss of just over 11,000 jobs. When regulatory growth increases to above-average levels, the effects are amplified. For a single year of above-average regulatory growth, small business employment recedes by 0.69 percent. Increasing the duration to three consecutive years of above-average regulatory growth, the employment shrinkage rate increases to 1.05 percent. If all very small firms (0–4 employees) were to face a decline of this magnitude, the job losses in 2015 would exceed 61,000 jobs. Clearly, the flow of new regulations is associated with sharp changes in both the number of and employment in very small firms. As firms face longer spells of regulatory growth (i.e., two or three consecutive years), these effects become more pronounced. Moreover, if the intensity of regulatory growth is increased (i.e., if growth is above average), the effects are greater still.

Next, we build a more formal regression model to estimate more precisely the effect of changes in federal regulations on the number of businesses.

5. Regression Analysis

As previously mentioned, building a model that explains the structure of the US economy and its distribution of firms of varying sizes by industry would be a monumental task and is beyond the scope of this paper. Instead, we seek to model changes in the number of firms over time—that is, we are concerned with the flow rather than the stock of firms by industry. This approach is advantageous in that any invariant or slowly evolving characteristic that influences the level of firms by size within an industry will exert little or no effect on the annual growth rate of firms. Our focus on the flow of regulations yields a simpler framework wherein the growth rate of total firms is regressed on exogenous factors that drive (or accelerate) that growth. Given that the rate of growth of the total number of firms within an industry naturally fluctuates over time with the business cycle and changing competitive pressures, we specifically control for the effects of these exogenous factors when estimating the impact of regulations on the number of firms. Our preferred model takes the form of the following fixed effects panel:

$$FirmGrowth_{it} = \alpha_i + \beta \cdot RegGrowth_{it} + X_{it}B + u_{it}, \quad (4)$$

where i is the cross-sectional NAICS industry index; t is the time period index; $FirmGrowth_{it}$ is the year-over-year growth rate in the total number of firms in industry i; α_i is an industry-specific fixed effect (which captures any differences in the long-run rate of growth of the industry due to exogenous changes in relative competitiveness, consumer demand, etc.); $RegGrowth_{it}$ is the year-over-year growth rate in the number federal regulatory restrictions that pertain to industry i; X_{it} is a matrix of control variables, including the US rate of unemployment and the US GDP gap (both of which capture business cycle conditions); and u_{it} is a mean-zero

error term.[8] Given our model specification, the coefficient on regulatory growth (i.e., β) is an elasticity measure equal to the percent change in the number of firms for a 1 percent change in regulations.[9] This growth elasticity of regulation, which we believe to be negative, reveals the sensitivity of firms (of a given size class) to increases in the rate of regulation.

Analogously to model (4) above, we also estimate the impact of federal regulatory growth on the growth rate of employment ($EmploymentGrowth_{it}$) within various industries by replacing the $FirmGrowth_{it}$ dependent variable with $EmploymentGrowth_{it}$, and we label the result model (5):

$$EmploymentGrowth_{it} = \alpha_i + \beta \cdot RegGrowth_{it} + X_{it}B + u_{it}. \quad (5)$$

We consider three firm-size classifications: (1) 0–4 employees, (2) 0–499 employees, and (3) 500 or more employees. These categories correspond to the smallest firms (0–4 employees), all small firms as defined by the SBA (0–499 employees), and large firms (500 or more employees). Given the exploratory results above, there is reason to believe that the impact of regulations on firms depends on firm size, and this hypothesis is testable given our firm size classifications.

Although we control for the common influence of the US business cycle on firms across industries, it is reasonable to anticipate that exogenous shocks may influence multiple industries simultaneously. Because of this, industry panels should exhibit cross-sectional dependence. While common exogenous shocks do not bias coefficient point estimates, they do impact

[8] Model (4) does not include a period fixed effect term, as the business cycle covariates already capture temporal fluctuations in the growth rate of total firms. Indeed, the fixed effects are so highly correlated with the business cycle measures that including period fixed effects within the model results in singularity problems (i.e., the projection matrix is not well defined and the regression coefficients cannot be calculated).

[9] In log-log models, the dependent variable, say $\ln(y)$, is regressed on a covariate of interest, say $\ln(x)$, and other log transformed covariates. The coefficient on $\ln(x)$ has an elasticity interpretation: it reveals the percent change in y that results from a 1 percent change in x. If this model is first differenced, we now regress $\Delta\ln(y)$ on $\Delta\ln(x)$ and the first difference of the remaining logged covariates. Note that the coefficient on $\Delta\ln(x)$ remains unchanged by the transformation and therefore retains the same elasticity interpretation.

coefficient standard errors and therefore inferential test statistics. Following common empirical practice, we compensate by utilizing White robust (cross-sectional) standard errors in assessing the statistical significance of coefficient estimates.

6. Estimation Results

Table 6 (page 44) reports the baseline regression estimates of models (4) and (5) for small and large firms. Columns (1) to (3) report the results for model (4)—that is, the impact of regulatory growth on the growth rate of the total number of firms of a given size within a given industry. In column (1), the coefficient on regulatory growth equals −0.0565 and is statistically significant at the 1 percent level. This coefficient indicates that a 1 percent increase in federal regulations is associated with a 0.0565 percent reduction in the number of very small firms (with 0–4 employees). To put this into perspective, a hypothetical 10 percent across-the-board increase in regulations (which is approximately equal to one standard deviation) would be associated with a 0.565 percent reduction in the total number of small firms. In 2015, there were more than 3.6 million small firms—therefore a 0.565 percent reduction represents the elimination of almost 21,000 small businesses. However, this is probably an optimistic assessment. Both the preceding exploratory analysis and the regression results suggest that the marginal impact of regulatory growth increases with the size of the regulatory growth.

Continuing with column (1), the coefficient on unemployment equals −0.3270, implying that a 1 percentage point increase in the US national rate of unemployment is associated with a reduction in the rate of growth in the number of small firms within an industry by 0.3270 percentage points. Although the sign of this coefficient estimate makes economic sense—a sagging economy with rising unemployment likely coincides with the failure of many small

businesses—it is statistically insignificant. Finally, the coefficient on the GDP gap[10] equals 0.0407, implying that each 1 percent increase in real US cyclical output above trend is associated with an increase in the rate of growth in the number of small firms by 0.0407 percentage points. This too makes economic sense: a booming economy should not only reduce the likelihood of business failure, but also encourage the formation of new startups. As with unemployment, this coefficient, while consistent with a priori expectations, is statistically insignificant.

Turning to the broadest measure of small business used by the SBA—that is, firms with 0 to 499 employees (see column 2)—the coefficient on regulatory growth equals −0.0423 and is statistically significant at the 5 percent level. This coefficient indicates that a 1 percent increase in federal regulations is associated with a 0.0423 percent reduction in the number of small firms (with between 0 and 499 employees). The coefficients on unemployment and the GDP gap are similar in to those reported in column (1), with the notable exception that the coefficient on unemployment is statistically significant at the 10 percent level. Interestingly, when we turn to large businesses—that is, firms with 500 or more employees (see column 3)—regulatory growth fails to have a statistically significant impact on the total number of firms. Clearly, large firms, in stark contrast to small firms, appear to be less susceptible to failure in environments of high regulatory growth.

To measure the impact of federal regulatory growth on total sectoral employment in firms of varying sizes, estimates of model (5) are provided in columns (4) through (6) of table 6. For very small firms (with 0–4 employees), a 1 percent increase in federal regulations is associated with a 0.0410 percent reduction in employment among the small firms in the affected industry.

[10] The GDP gap equals the cyclical component of US real GDP derived via the Hodrick-Prescott filter. Measured in billions of real 2009 dollars, positive values for the GDP gap correspond to periods of economic expansion while negative values correspond to periods of recession.

As before, we can demonstrate the importance of this finding by considering a 10 percent across-the-board increase in federal regulations, which is associated with a 0.410 percent decline in small business employment. In 2015, nearly 5.9 million people were employed by very small businesses (with 0–4 employees). A 0.410 percent reduction in employment would result in the loss of just over 24,000 jobs.

For all small businesses (0–499 employees), a 1 percent increase in federal regulations is associated with a 0.0547 percent reduction in employment among the small firms in the affected industry. Again, this may seem like a low value, but a 10 percent across-the-board increase in federal regulations is associated with a loss of more than 322,000 jobs, on the basis of 2015 employment levels. We again find that regulatory growth does not have a statistically significant impact on large firms: the coefficient for employment among large firms is statistically insignificant.

Taken together, these results paint an important picture. First, when federal regulations are increased within a given industry, both the level of employment and the total number of firms are reduced by a similar rate, roughly 0.5 percent per 10 percent increase in regulations. Second, these unintended consequences fall squarely on small firms with fewer than 500 employees. And finally, relatively large firms with 500 or more employees are not negatively affected in a statistically significant way. However, this is probably an optimistic assessment. Both the preceding exploratory analysis and the regression results described below suggest that the marginal impact of higher regulatory growth is neither constant over time nor constant in intensity when industries are subjected to consecutive periods of above-average regulatory growth.

6.1. The Impact of Regulations on Firms Pre- and Post-2008

In the wake of the financial crisis of 2008 and the change of presidential administrations, the sensitivity of small businesses to increases in federal regulations appears to be more pronounced, with the growth rate of the total number of small firms exhibiting large negative correlations with regulatory growth, in marked contrast to that of large firms, which appeared to thrive in this high-regulatory-growth environment. To more formally test this phenomenon, we estimate the following variant of model (4):

$$FirmGrowth_{it} = \alpha_i + \alpha \cdot \delta_{t<08} + (\beta_1 + \beta_2 \cdot \delta_{t<08}) \cdot RegGrowth_{it} + X_{it}B + u_{it}, \qquad (6)$$

where the dummy variable $\delta_{t<08}$ equals 1 for all years before 2008. Entering model (6) in this way, the dummy variable acts as both an intercept and slope dummy, allowing the impact of regulatory growth on growth of the number of firms to vary over the two time periods. For the pre-2008 period, the coefficient β_2 captures the change in this important regulation-firm elasticity measure. We therefore use a one-sided t-test on β_2 to determine whether regulatory growth is associated with less firm attrition in the pre-2008 time period (or, equivalently, whether there was more associated firm attrition from 2008 onward):

$$H_0: \beta_2 \leq 0$$

$$H_1: \beta_2 > 0.$$

Under this formulation of the test, our a priori expectations are captured by the alternative hypothesis (H_1), whereby the coefficient on regulatory growth is larger in the pre-2008 period ($\beta_1 + \beta_2$) and smaller from 2008 onward (β_1). The null hypothesis is therefore a "straw man" which, if rejected, supports our theory.

Analogously to model (6) above, we also estimate the impact of federal regulatory growth on the growth rate of employment ($EmploymentGrowth_{it}$) within various industries by

replacing the $FirmGrowth_{it}$ dependent variable with $EmploymentGrowth_{it}$, and we label the result model (7):

$$EmploymentGrowth_{it} = \alpha_i + \alpha \cdot \delta_{t<08} + (\beta_1 + \beta_2 \cdot \delta_{t<08}) \cdot RegGrowth_{it} + X_{it}B + u_{it}. \quad (7)$$

Table 7 (page 45) reports the estimation results of models (6) and (7). Looking first at the impact of regulations on the total number of firms of various sizes (i.e., columns 1 to 3), the results are in line with our expectations. In the smallest firms (0–4 employees), the regulation coefficient (β_1) equals −0.0854 and is significant at the 1 percent level. This implies that from 2008 onward, a 1 percent increase in industry regulations is associated with a 0.0854 percent decline in very small firms within that industry. In line with our expectations, the slope dummy coefficient (β_2), which equals 0.0700, is positive and statistically significant at the 10 percent level (its two-sided p-value equals 0.0893). Conducting the one-sided hypothesis test outlined above, we reject the hypothesis that β_2 is weakly negative at the 5 percent level and accept the alternative hypothesis that regulatory growth is associated with less firm attrition in the pre-2008 time period.

Our model predicts that in the pre-2008 period, a 1 percent increase in industry regulations is associated with a 0.0154 percent decline in very small firms within that industry. While statistically significant, this result is economically insignificant—that is, the result is tiny in absolute magnitude and close to zero. Among all small businesses (0–499 employees), the results are very similar. Both regulation slope coefficients possess the correct signs and are statistically significant at the 1 percent level. Therefore, we also reject the hypothesis that β_2 is weakly negative at the 1 percent level and accept the alternative hypothesis that regulatory growth is associated with less small business attrition in the pre-2008 time period. Therefore, our model predicts that from 2008 onward, a 1 percent increase in industry regulations is associated

with a 0.0811 percent decline in the number of small firms within that industry. Our model also predicts that in the pre-2008 period, a 1 percent increase in industry regulations is associated with a 0.0104 percent increase in very small firms within that industry. As before, while statistically significant, this result is economically insignificant. Hence, there is a stark difference in the sensitivity of small businesses to increases in federal regulations in the periods before and after 2008. Finally, the number of large firms within a given industry does not appear to be negatively impacted by regulatory growth either before or after 2008.

Turning to the effect of regulations on industry employment over these time periods (i.e., columns 4 to 6), we find results similar to those reported in columns (1) to (3). Specifically, for the period of 2008 and beyond, regulations have a negative and statistically significant impact on small firm employment, with coefficient estimates ranging from −0.0770 for the smallest firms (0–4 employees) to −0.1065 for all small firms (0–499 employees). These values are quite large and imply that a 10 percent increase in industry-specific regulation is associated with a nearly 1.1 percent reduction in the level of employment in small firms. In line with our expectations, the slope dummy coefficient (β_2) is positive and statistically significant at the 5 percent level in both of the small business regression models (see columns 4 and 5). For both the smallest firms (0–4 employees) and all small firms (0–499 employees), we conduct the one-sided hypothesis test outlined above and reject the hypothesis that β_2 is weakly negative at the 5 percent and 1 percent levels respectively, and in both cases accept the alternative hypothesis that regulatory growth is associated with greater small firm employment losses from 2008 onward.

6.2. The Impact of Consecutive Spells of Above-Average Regulatory Growth

Not surprisingly, our exploratory analysis suggests that when businesses are subjected to several consecutive years of above-average regulatory growth, the negative impact of additional regulatory increases is amplified. To formally test this hypothesis, we modify model (4) as follows:

$$FirmGrowth_{it} = \alpha_i + \alpha \cdot \delta_{high} + \left(\beta_1 + \beta_2 \cdot \delta_{high}\right) \cdot RegGrowth_{it} + X_{it}B + u_{it}, \quad (8)$$

where the dummy variable δ_{high} equals 1 when the two preceding years experienced above-average growth in industry-specific federal regulations (i.e., $RegGrowth_{it-1}\ and\ RegGrowth_{it-2} > 3.83\%$). This dummy variable enters as both an intercept and slope dummy, allowing the impact of regulatory growth on growth of the number of firms to vary depending on the severity of past regulatory growth episodes. For cases where industries endure prior consecutive years of above-average regulatory growth, $\beta_1 + \beta_2$ captures this high-stress elasticity measure while β_1 captures the regulation-firm elasticity in all other cases. We therefore use a one-sided t-test on β_2 to determine whether regulatory growth is associated with greater firm attrition following two consecutive years of high regulatory growth:

$$H_0: \beta_2 \geq 0$$

$$H_1: \beta_2 < 0.$$

Under this formulation of the test, our a priori expectations are captured by the alternative hypothesis (H_1), whereby the coefficient on regulatory growth ($\beta_1 + \beta_2$) is smaller (i.e., "more negative") following two consecutive years of high regulatory growth. The null hypothesis is therefore a "straw man" which, if rejected, supports our theory.

Analogously to model (8) above, we also estimate the impact of federal regulatory growth on the growth rate of employment ($EmploymentGrowth_{it}$) within various industries by

replacing the $FirmGrowth_{it}$ dependent variable with $EmploymentGrowth_{it}$, and we label the result model (9):

$$EmploymentGrowth_{it} = \alpha_i + \alpha \cdot \delta_{high} + (\beta_1 + \beta_2 \cdot \delta_{high}) \cdot RegGrowth_{it} + X_{it}B + u_{it}. \quad (9)$$

Table 8 (page 46) reports the estimation results of models (8) and (9). Looking first at the impact of regulatory growth on small firms (with 0–4 employees), we see that an increase in current regulations has a negative and statistically significant impact on the total number of small firms, regardless of the severity of prior regulatory growth. Both the coefficient on regulatory growth (β_1) and the high regulation slope dummy coefficient (β_2) are negative and statistically significant at the 5 percent level. Therefore, we reject the above null hypothesis that consecutive years of high regulatory growth are associated with less firm attrition. In the case of two prior years of high consecutive regulatory growth, the regulation-firm elasticity measure equals -0.154 (i.e., $\beta_1 + \beta_2$). This implies that if an industry is recovering from prior back-to-back years of above-average regulatory growth, each additional 1 percent increase in federal regulations in the current period is associated with a 0.154 percent reduction in the number of very small firms. In other words, a 10 percent across-the-board increase in federal regulations would reduce the number of very small firms by 1.54 percent, which is equivalent to over 56,000 very small firms in 2015.

Clearly, higher regulatory growth hurts very small firms, but the unintended consequences compound with repeated years of steep regulatory growth. For all small firms (0–499 employees), the results are very similar. Specifically, both the coefficient on regulatory growth (β_1) and the high regulation slope dummy coefficient (β_2) are negative and statistically significant at the 10 percent level. Therefore, we reject the above null hypothesis that consecutive years of high regulatory growth are associated with less firm attrition. In the case of

two prior years of high consecutive regulatory growth, the regulation-firm elasticity measure equals −0.1 (i.e., $\beta_1 + \beta_2$). This implies that if an industry is recovering from prior back-to-back years of above-average regulatory growth, each additional 1 percent increase in federal regulations in the current period is associated with a 0.1 percent reduction in the number of all small firms. In other words, a 10 percent across-the-board increase in federal regulations would reduce the number of small firms by 1 percent, which is equivalent to just under 59,000 small firms in 2015. For large firms (500 or more employees), both elasticity measures are statistically insignificant. Thus, bouts of prolonged regulatory growth are more negatively associated with the loss of small businesses than of large businesses.

Lastly, we examine the employment impacts of consecutive years of regulatory growth on small and large firms (see columns 4 to 6). Overall, the results are somewhat mixed. For both very small firms (0–4 employees) and large firms (more than 500 employees), the estimated high regulation slope dummy coefficients (β_2) are negative and statistically significant at the 5 percent level. Therefore, for both of these size classes we reject the above null hypothesis that consecutive years of high regulatory growth are associated with lower employment losses. Moreover, the coefficient on regulatory growth (β_1) has the correct sign but is statistically insignificant in the regressions for both very small firms (0–4 employees) and large firms (500 or more employees). Therefore, a 10 percent across-the-board increase in all regulations (when preceded by two consecutive years of above-average regulations) is associated with a 0.959 percent decline in very-small-firm employment and a 1.362 percent decline in large-firm employment. In 2015, this corresponds to job losses totaling over 56,000 and 887,000, respectively. For the group of all small businesses (0–499 employees), the high regulation slope

dummy coefficient (β_2) is statistically insignificant. While this result is puzzling, the coefficient on overall regulatory growth (β_1) has the correct sign and is statistically significant.

7. Discussion

Economic theory tells us that regulations, if applied equally to businesses of all sizes, are likely to disproportionately harm smaller businesses. While some relief mechanisms for smaller businesses do exist, the extent of their availability is still unknown, let alone the degree to which they actually balance the burden of regulations across businesses of different sizes. Although the disparate effects of regulatory costs on businesses of different sizes have long been discussed in the political and academic realms, little work has been done to empirically test the existence and magnitude of such effects. This paper begins to fill this gap in the academic literature, and contributes information to the political debate in a way that might improve our knowledge of the true effects of regulations, particularly as they continue to accumulate.

Controlling for relevant factors, we test how increases in regulation on specific industries are associated with the number of firms and the employment in firms of various sizes within those industries. We find that increases in industry-specific regulations are associated with decreases in the number of and employment in small firms within those industries, while having no association with changes experienced by large firms. These declines in the number of firms and in employment are also amplified when they follow previous years of regulatory growth, implying that regulatory increases disproportionately burden small businesses at an increasing rate. We also find that these developments are not statistically significant in the lead-up to the 2008 financial crisis, but are statistically significant in the period following the crisis. Because the post–financial crisis period was one of high regulatory growth, this provides further evidence

that the negative effects of regulation are not constant but are amplified during periods of abnormally high regulatory growth.

Existing research already shows that regulations are associated with disproportionately high costs for lower-income households. The disproportionate burdens on these households come in forms such as lower wages (Bailey, Thomas, and Anderson 2018) and higher prices for household goods (Chambers, Collins, and Krause 2017). Chambers, McLaughlin, and Stanley (2018) show that entry regulations (rules that set requirements for starting businesses and entering markets) increase income inequality. Furthermore, Coffey, McLaughlin, and Peretto (2016) show that regulatory accumulation reduces economic growth, slowing the process that creates wealth for the entire society, including lower-income households.

Our study advances this research by showing how regulatory accumulation appears to harm small businesses relative to their larger competitors. Since small businesses are more common in low-income areas, and because these businesses may often provide low-income households with opportunities for economic advancement, any negative effects of regulations on small businesses add to this list of harmful regressive effects. Taken together, these studies indicate that we must consider not only the costs and benefits of regulations on the parties immediately affected, but also the disproportionate effects of regulations and regulatory accumulation on specific groups. Consideration of these costs is essential for understanding the true individual and cumulative effects of regulations, and for ensuring a fair economic system.

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Table 1. Distribution of Firms by Size in the US, 1998–2015

	Firm size category (by number of employees)							
Year	Total	0–4	5–9	10–19	20–99	100–499	<500	500+
1998	5,579,177	3,376,351	1,011,849	600,167	494,357	80,075	5,562,799	16,378
1999	5,607,743	3,389,161	1,012,954	605,693	501,848	81,347	5,591,003	16,740
2000	5,652,544	3,396,732	1,021,210	617,087	515,977	84,385	5,635,391	17,153
2001	5,657,774	3,401,676	1,019,105	616,064	518,258	85,304	5,640,407	17,367
2002	5,697,759	3,465,647	1,010,804	613,880	508,249	82,334	5,680,914	16,845
2003	5,767,127	3,504,432	1,025,497	620,387	515,056	84,829	5,750,201	16,926
2004	5,885,784	3,579,714	1,043,448	632,682	526,355	86,538	5,868,737	17,047
2005	5,983,546	3,677,879	1,050,062	629,946	520,897	87,285	5,966,069	17,477
2006	6,022,127	3,670,028	1,060,787	646,816	535,865	90,560	6,004,056	18,071
2007	6,049,655	3,705,275	1,060,250	644,842	532,391	88,586	6,031,344	18,311
2008	5,930,132	3,617,764	1,044,065	633,141	526,307	90,386	5,911,663	18,469
2009	5,767,306	3,558,708	1,001,313	610,777	495,673	83,326	5,749,797	17,509
2010	5,734,538	3,575,240	968,075	617,089	475,125	81,773	5,717,302	17,236
2011	5,684,424	3,532,058	978,993	592,963	481,496	81,243	5,666,753	17,671
2012	5,726,160	3,543,991	992,716	593,641	494,170	83,423	5,707,941	18,219
2013	5,775,055	3,575,290	992,281	600,551	503,033	85,264	5,756,419	18,636
2014	5,825,458	3,598,185	998,953	608,502	513,179	87,563	5,806,382	19,076
2015	5,900,731	3,643,737	1,004,555	617,390	526,106	89,479	5,881,267	19,464

Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html.

Table 2. Distribution of Employment by Firm Size in the US, 1998–2015

	Firm size category (by number of employees)								
Year	Total	0–4	5–9	10–19	<20	20–99	100–499	<500	500+
1998	108,117,731	5,584,470	6,643,285	8,047,650	20,275,405	19,377,614	15,411,390	55,064,409	53,053,322
1999	110,705,661	5,606,302	6,652,370	8,129,615	20,388,287	19,703,162	15,637,643	55,729,092	54,976,569
2000	114,064,976	5,592,980	6,708,674	8,285,731	20,587,385	20,276,634	16,260,025	57,124,044	56,940,932
2001	115,061,184	5,630,017	6,698,077	8,274,541	20,602,635	20,370,447	16,410,367	57,383,449	57,677,735
2002	112,400,654	5,697,652	6,639,666	8,246,053	20,583,371	19,874,069	15,908,852	56,366,292	56,034,362
2003	113,398,043	5,768,407	6,732,132	8,329,813	20,830,352	20,186,989	16,430,229	57,447,570	55,950,473
2004	115,074,924	5,844,637	6,852,769	8,499,681	21,197,087	20,642,614	16,757,751	58,597,452	56,477,472
2005	116,317,003	5,936,859	6,898,483	8,453,854	21,289,196	20,444,349	16,911,040	58,644,585	57,672,418
2006	119,917,165	5,959,585	6,973,537	8,676,398	21,609,520	21,076,875	17,537,345	60,223,740	59,693,425
2007	120,604,265	6,139,463	6,974,591	8,656,182	21,770,236	20,922,960	17,173,728	59,866,924	60,737,341
2008	120,903,551	6,086,291	6,878,051	8,497,391	21,461,733	20,684,691	17,547,567	59,693,991	61,209,560
2009	114,509,626	5,966,190	6,580,830	8,191,289	20,738,309	19,389,940	16,153,254	56,281,503	58,228,123
2010	111,970,095	5,926,452	6,358,931	8,288,385	20,573,768	18,554,372	15,868,540	54,996,680	56,973,415
2011	113,425,965	5,857,662	6,431,931	7,961,281	20,250,874	18,880,001	15,867,437	54,998,312	58,427,653
2012	115,938,468	5,906,506	6,527,943	7,974,340	20,408,789	19,387,249	16,266,855	56,062,893	59,875,575
2013	118,266,253	5,926,660	6,523,516	8,058,077	20,508,253	19,697,707	16,617,417	56,823,377	61,442,876
2014	121,069,944	5,940,248	6,570,776	8,176,519	20,687,543	20,121,588	17,085,461	57,894,592	63,175,352
2015	124,085,947	5,877,075	6,614,340	8,297,864	20,789,279	20,645,466	17,503,402	58,938,147	65,147,800

Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html.

Table 3. Annual Growth of Industry-Specific Regulations

Year	Regulatory growth (%)	Year	Regulatory growth (%)
1999	3.13	2008	5.09
2000	0.82	2009	3.46
2001	3.76	2010	4.82
2002	3.06	2011	4.54
2003	3.06	2012	6.70
2004	6.02	2013	3.62
2005	3.49	2014	2.95
2006	2.37	2015	5.56
2007	1.73		

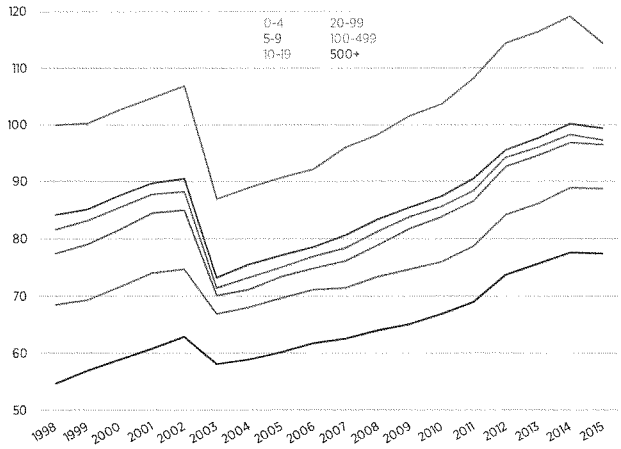
Note: Table displays average year-over-year rate of growth of industry-specific regulations.
Source: RegData 3.0.

Table 4. Weighted Regulatory Restrictions by Year

	Firm size category (by number of employees)					
Year	0–4	5–9	10–19	20–99	100–499	500+
1998	25,633	21,583	20,895	19,817	17,550	14,026
1999	25,687	21,819	21,321	20,228	17,756	14,610
2000	26,300	22,446	21,889	20,906	18,367	15,099
2001	26,864	22,989	22,496	21,653	18,973	15,562
2002	27,400	23,186	22,603	21,764	19,123	16,098
2003	22,250	18,765	18,327	17,965	17,152	14,880
2004	22,750	19,353	18,770	18,239	17,423	15,083
2005	23,233	19,741	19,204	18,803	17,870	15,428
2006	23,599	20,133	19,698	19,162	18,213	15,815
2007	24,563	20,670	20,091	19,487	18,313	16,036
2008	25,169	21,382	20,845	20,227	18,791	16,401
2009	26,033	21,907	21,491	20,960	19,118	16,702
2010	26,558	22,390	21,930	21,476	19,463	17,138
2011	27,714	23,176	22,651	22,200	20,172	17,686
2012	29,290	24,439	24,111	23,727	21,565	18,889
2013	29,790	24,990	24,585	24,225	22,071	19,378
2014	30,508	25,648	25,143	24,784	22,774	19,862
2015	29,310	25,447	24,915	24,726	22,743	19,827

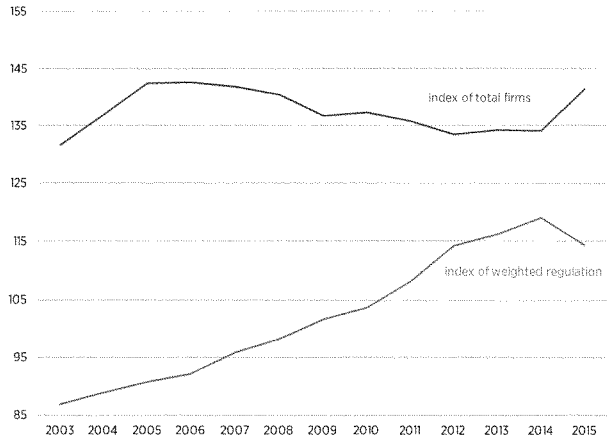
Note: Regulations by industry are weighted by the proportion of total firms of a given size within that industry.
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Figure 1. Index of Weighted Regulation by Firm Size



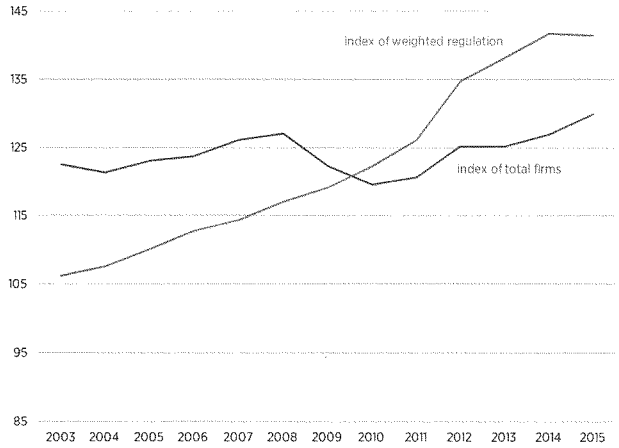
Note: For each firm size category (e.g., 10–19 employees), the corresponding weighted regulations (see table 4) are divided by the weighted regulations for small firms in 1998 (25,633 weighted regulatory restrictions), and the resulting ratio is multiplied by 100. Thus, the indexes are relative measures equal to 100 when the regulatory burden equals that faced by small firms in 1998.
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Figure 2. Total Small Firms vs. Small Firm Index of Weighted Regulation



Note: The index of small firms equals the total number of small firms each year divided by the number of small firms in 1998, and this ratio is multiplied by 100. The regulation index is the firm-size-weighted measure of regulations faced by small firms divided by the weighted regulations for small firms in 1998 (25,633 weighted regulatory restrictions); again, the resulting ratio is multiplied by 100.
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Figure 3. Total Large Firms vs. Large Firm Index of Weighted Regulation



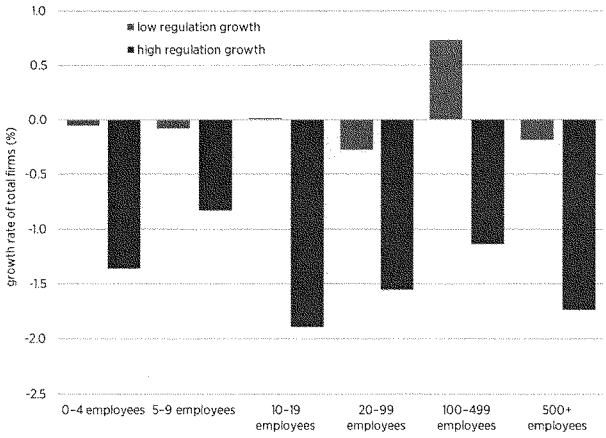
Note: The index of large firms equals the total number of large firms each year divided by the number of large firms in 1998, and this ratio is multiplied by 100. The regulation index is the firm-size-weighted measure of regulations faced by large firms divided by the weighted regulations for large firms in 1998 (14,026 weighted regulatory restrictions); again, the resulting ratio is multiplied by 100.
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Table 5. Correlation between Total Firms of Varying Sizes and Weighted Regulation

	Firm size category (by number of employees)					
Period	0–4	5–9	10–19	20–99	100–499	500+
2003–2015	−0.323	−0.825	−0.908	−0.810	0.178	0.533
2009–2015	−0.283	−0.391	−0.837	−0.228	0.713	0.884

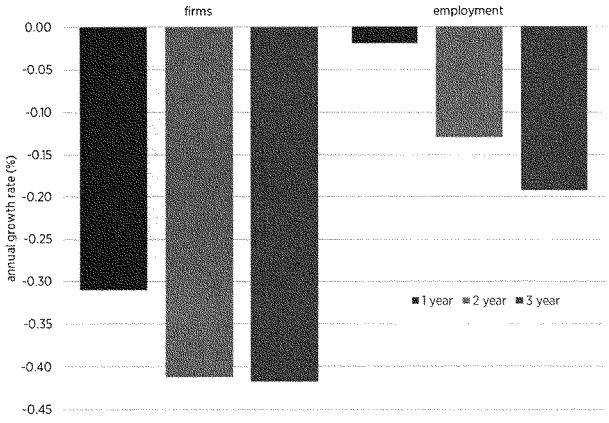
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; Authors' calculations.

Figure 4. Growth of Total Firms in Industries with High vs. Low Regulatory Growth



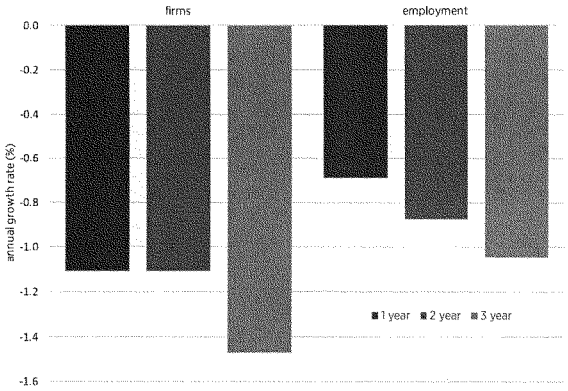
Note: For each firm size category, the average year-over-year growth rate of total firms within each industry was calculated. Industry-year observations for which the corresponding rate of regulatory growth was low (in the bottom quartile for the entire sample) were grouped and the overall average growth rate of total firms for the group was calculated. This procedure was repeated for the high regulatory growth group (in the top quartile).
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Figure 5. Impact of Consecutive Years of Regulatory Growth on Very Small Firms



Note: Small firms with 0–4 employees were grouped on the basis of whether they experienced regulatory growth for one year, two consecutive years, or three consecutive years. The overall average growth rate of (1) total number of firms and (2) total employment was then calculated for each group.
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Figure 6. Impact of Consecutive Years of Above-Average Regulatory Growth on Very Small Firms



Note: Small firms with 0–4 employees were grouped on the basis of whether they experienced above-average regulatory growth for one year, two consecutive years, or three consecutive years. The overall average growth rate of (1) total number of firms and (2) total employment was then calculated for each group.
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Table 6. Baseline Regression Estimates of Models (4) and (5) for Small and Large Firms

	(1)	(2)	(3)	(4)	(5)	(6)
	Growth in total firms (dependent variable)			Growth in total employment (dependent variable)		
Variables	0–4 employees	0–499 employees	500+ employees	0–4 employees	0–499 employees	500+ employees
Regulatory growth	-0.0565***	-0.0423**	-0.0372	-0.0410**	-0.0547*	-0.0470
	(0.0203)	(0.0206)	(0.0317)	(0.0211)	(0.0295)	(0.0409)
Unemployment	-0.3270	-0.3930*	-0.1412	-0.3694	-0.6023**	-0.2705
	(0.2343)	(0.2049)	(0.4470)	(0.2758)	(0.3098)	(0.5416)
GDP gap	0.0407	0.1439	0.7270	0.1257	0.5756	1.6215**
	(0.3903)	(0.3928)	(0.7451)	(0.4969)	(0.6859)	(0.8045)
Observations	10,226	10,226	10,226	10,226	10,226	10,226
Goodness of fit	0.149	0.194	0.103	0.135	0.166	0.166

Notes: Dependent variable is the year-over-year growth rate of the total number of firms or total employment. Intercept included but not reported. Industry-specific fixed effects included but not reported. White robust cross-section standard errors in parentheses. ***, **, and * denote 1 percent, 5 percent, and 10 percent statistical significance, respectively.
Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Table 7. Marginal Impact of Regulations (Pre- and Post-2008) in Models (6) and (7) for Small and Large Firms

	(1)	(2)	(3)	(4)	(5)	(6)
	Growth in total firms			Growth in total employment		
Variables	0–4 employees	0–499 employees	500+ employees	0–4 employees	0–499 employees	500+ employees
Pre-2008 dummy	1.0042	0.6089	−0.6058	0.9626	−0.2748	−3.1814*
	(0.8678)	(0.5696)	(0.8308)	(1.0116)	(1.0224)	(1.678)
Regulatory growth	−0.0854***	−0.0811***	−0.0616	−0.0770**	−0.1065**	−0.0861
	(0.0331)	(0.0289)	(0.0517)	(0.0319)	(0.0435)	(0.0712)
Regulatory growth × pre-2008 dummy	0.0700*	0.0915***	0.0545	0.0863**	0.1186**	0.0799
	(0.0412)	(0.0323)	(0.0608)	(0.0432)	(0.0474)	(0.0798)
Unemployment	0.0348	−0.1124	−0.2388	0.0015	−0.5294	−1.0407
	(0.3127)	(0.2296)	(0.4692)	(0.4015)	(0.4176)	(0.7265)
GDP gap	0.2908	0.3528	0.6890	0.3879	0.6681	1.1812
	(0.3971)	(0.3863)	(0.7415)	(0.5553)	(0.7389)	(0.8609)
Observations	10,226	10,226	10,226	10,226	10,226	10,226
Goodness of fit	0.151	0.197	0.104	0.137	0.169	0.169

Notes: Dependent variable is the year-over-year growth rate of the total number of firms or total employment. Intercept included but not reported. Industry-specific fixed effects included but not reported. White robust cross-section standard errors in parentheses. ***, **, and * denote 1 percent, 5 percent, and 10 percent statistical significance, respectively.

Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

Table 8. Impact of Consecutive Years of Above-Average Regulations on Small and Large Firms in Models (8) and (9)

	(1)	(2)	(3)	(4)	(5)	(6)
	Growth in total firms			Growth in total employment		
Variables	0–4 employees	0–499 employees	500+ employees	0–4 employees	0–499 employees	500+ employees
High growth dummy	−0.0943	−0.1697	0.6965	−0.4712	0.0940	0.7867
	(0.6396)	(0.4889)	(0.7594)	(0.6562)	(0.4600)	(1.0215)
Regulatory growth	−0.0448**	−0.0355*	−0.0320	−0.0309	−0.0499*	−0.0320
	(0.0208)	(0.0211)	(0.0342)	(0.0220)	(0.0271)	(0.0379)
Regulatory growth × high growth dummy	−0.1092**	−0.0645*	−0.0454	−0.0959**	−0.0448	−0.1362**
	(0.0471)	(0.0349)	(0.0627)	(0.0484)	(0.0425)	(0.0614)
Unemployment	−0.3290	−0.3933*	−0.1471	−0.3684	−0.6040*	−0.2793
	(0.2334)	(0.2039)	(0.4417)	(0.2770)	(0.3087)	(0.5450)
GDP gap	0.0338	0.1410	0.7166	0.1236	0.5715	1.6036**
	(0.3932)	(0.3952)	(0.7371)	(0.4994)	(0.6857)	(0.8104)
Observations	10,226	10,226	10,226	10,226	10,226	10,226
Goodness of fit	0.150	0.194	0.104	0.136	0.166	0.167

Note: Dependent variable is the year-over-year growth rate of the total number of small firms or total employment. Intercept included but not reported. Industry specific fixed effects included but not reported. White robust cross-section standard errors in parentheses. The high growth dummy equals one if the industry experienced two consecutive prior years of above-average regulatory growth. ***, **, and * denote 1 percent, 5 percent, and 10 percent statistical significance, respectively.

Source: US Census Bureau, "Statistics of US Businesses: Annual Data Tables by Establishment Industry," accessed February 13, 2018, https://www.census.gov/programs-surveys/susb/data/tables.html; RegData 3.0; authors' calculations.

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Regulation and Poverty

An Empirical Examination of the Relationship between the Incidence of Federal Regulation and the Occurrence of Poverty across the States

Dustin Chambers, Patrick A. McLaughlin, and Laura Stanley

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Abstract

We estimate the impact of federal regulations on poverty rates in the 50 US states using the recently created Federal Regulation and State Enterprise (FRASE) index, which is an industry-weighted measure of the burden of federal regulations at the state level. Controlling for many other factors known to influence poverty rates, we find a robust, positive, and statistically significant relationship between the FRASE index and poverty rates across states. Specifically, we find that a 10 percent increase in the effective federal regulatory burden on a state is associated with an approximate 2.5 percent increase in the poverty rate. This paper fills an important gap in both the poverty and the regulation literature because it is the first paper to estimate the relationship between these variables. Moreover, our results have practical implications for federal policymakers and regulators, because the increased poverty that results from additional regulations should be considered when weighing the costs and benefits of additional regulations.

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Regulation and Poverty:

An Empirical Examination of the Relationship between the

Incidence of Federal Regulation and the Occurrence of Poverty across the States

Dustin Chambers, Patrick A. McLaughlin, and Laura Stanley

1. Introduction

Poverty is one of the most pressing challenges that public policymakers face. Unfortunately, little consensus exists on how to remedy this stubbornly persistent problem. We argue in this paper that federal regulatory reform may offer a way forward.

The link between poverty and regulatory policy has been widely neglected by economists. As such, this paper is the first to examine the relationship between poverty and federal regulations across the states. Although both regulation and poverty are interesting in their own right, we argue that there is an underappreciated connection between them that policymakers should consider when drafting new rules. Empirically estimating this relationship was impossible until recently because of the unavailability of state-level regulatory data. However, in this paper, we use the recently created Federal Regulation and State Enterprise (FRASE) index, which ranks the 50 states and the District of Columbia according to how federal regulations affect each state or district. Specifically, we characterize the association between poverty and regulation by exploiting variation across space and time in poverty rates and in the FRASE index among the states. Although variation in poverty rates is observational and remains to be explained, variation in the FRASE index arises by construction from two sources: (1) differences over time in the quantity of federal regulation targeting each industry in a state's

economy and (2) year-to-year changes in the mix and relative importance of industries in each state (as measured by value added to the state's GDP).[1]

Before the release of the FRASE dataset, anyone seeking to research the impact of federal regulations at the state level faced a daunting task. The 2016 *Code of Federal Regulations* (CFR), which annually compiles all current federal regulations, spans 236 volumes and is more than 175,000 pages long (McLaughlin and Sherouse 2016). Manually reading the CFR, classifying each regulatory restriction by industry, and repeating this process for each prior year to construct a panel dataset would take decades.[2] Fortunately, RegData, a suite of data-mining and machine-learning algorithms developed by Al-Ubaydli and McLaughlin (2015) and McLaughlin and Sherouse (2016), has made it possible for computers to mine the CFR, identify regulatory restrictions, and probabilistically match these restrictions to the four-digit North American Industry Classification System industry codes to which they apply.[3]

Although federal regulation applies to all states, each state's economy comprises a different mix of industries. As a result, regulations that affect a specific industry will affect states in different ways. To address this problem, McLaughlin and Sherouse, the makers of the FRASE index, matched and weighted national-level regulations (from RegData) by the relative importance of each industry to each state using input-output data available from the Bureau of Economic Analysis (BEA).

We focus on regulations because economists have long recognized that they have both real and distributive effects on the economy. Friedman (1962) emphasizes that the relative

[1] For complete details on how the FRASE index is calculated, see the appendix to McLaughlin and Sherouse (2016, 29–31).
[2] The Mercatus Center estimates that the average reader (reading at a rate of 300 words per minute) would take nearly three years to read the current CFR if it were a full-time job: https://quantgov.org/regdata/the-code-of-federal-regulations-the-ultimate-longread/.
[3] For more information on RegData, see https://quantgov.org/regdata/.

distribution of income is a reflection of the operation of the market economy, given the initial endowments and preferences of participants and the success or failure of their individual economic decisions. Government policies, such as federal regulations, influence economic winners and thus the resulting income distribution. Higgs (1987) stresses that regulations reduce the sphere of private economic decision-making, because through regulations and restrictions, the government effectively makes choices for the private sector. Given that these predetermined choices are likely to be dynamically inefficient, the result is both reduced freedom and poorer long-run economic performance.

Consistent with these theories, a growing number of recent papers empirically estimate the negative impact of federal regulations on the US economy. Using an older and less reliable measure of federal regulations (i.e., the number of pages in the CFR), Dawson and Seater (2013) find that since 1949, the growth of federal regulations has significantly decreased the rate of US economic growth. Specifically, they estimate that the cumulative loss of output between 1949 and 2011 totals $38.8 trillion.[4] Crain and Crain (2014) estimate that the annual cost of federal regulations equals $2 trillion. Coffey, McLaughlin, and Peretto (2016) find that if federal regulations had been frozen in 1980 and subsequently never increased, the US economy would have been approximately 25 percent larger in 2015 than it actually was. Collectively, those results demonstrate that federal regulations represent a significant economic headwind that slows economic growth and reduces real incomes. Even in a best-case scenario whereby these impacts affect all income groups proportionately (i.e., there is no change in income inequality), the absolute income levels of low-income individuals would be reduced and there would be more

[4] To put that number into perspective, note that the nominal GDP in 2011 equaled $15.8 trillion (see http://www.bea.gov). Therefore, the cumulative impact of regulations from 1949 to 2011 was roughly 2.5 times the size of the US economy in 2011.

people living below any absolute poverty threshold. Unfortunately, recent research finds ample evidence that regulations have regressive effects—that is, that regulations have a disproportionately negative impact on poorer households.

There is a growing body of literature on the regressive effects of regulations. Such effects include costly risk mitigation, higher consumer prices, barriers to entry (such as those created by occupational licensure and startup regulations), and compliance costs and mandates. These strands of the literature both individually and collectively demonstrate that regulations disproportionately hurt the most vulnerable in society, including would-be entrepreneurs; those with less education, fewer skills, and less job experience; and those with less income and political clout. Therefore, it is not unreasonable to hypothesize that greater regulation, all else being equal, diminishes economic mobility and reduces the economic opportunities of low-income individuals, thereby making it harder to escape poverty. We next briefly summarize each of these facets of the literature on the regressive effects of regulation.

Thomas (2012) argues that regulations aimed at reducing health and safety risks tend to be regressive. High-income earners, relative to low-income earners, have a higher willingness to pay to mitigate low-probability risks. When federal regulations target low-probability risks—especially those that are expensive to mitigate—all households pay for them in the form of lower wages and higher prices. These costs are disproportionately borne by low-income earners. Chambers, Collins, and Krause (2018) find empirical evidence that the poorest households spend a larger proportion of their income on goods and services that are heavily regulated, suggesting that the regulations have a regressive effect.

Small business owners and would-be entrepreneurs are also disproportionately affected. Crain and Crain (2010) find that small businesses bear most of the costs of regulation. Chambers,

McLaughlin, and Stanley (2018) find that countries with more barriers to business entry tend to experience higher levels of income inequality. Chambers and Munemo (2017) find that nations with more startup regulations also have lower rates of entrepreneurship. Bailey, Thomas, and Anderson (2018) find that regulations lead to an increase in the relative demand for compliance-oriented professionals (e.g., lawyers and accountants), which means lower wage growth and fewer job prospects for less educated, noncompliance workers. McLaughlin, Ellig, and Shamoun (2014) find that occupational licensing has a disparate impact on the economically vulnerable, including ethnic minorities. Kleiner and Krueger (2013) estimate that nearly one-third of workers were affected by occupational licensure regulations as of 2008. Taken together, these findings suggest that regulations diminish opportunities for social mobility and economic advancement, thus stranding many in a life of poverty.

Although the previous literature on regulation has focused on its regressive impact on prices, entrepreneurship, or inequality, all of which are determinants of poverty, no study has provided a comprehensive analysis of the impact of regulation on poverty itself. This paper fills that gap in the literature by examining the regressive relationship between regulation and the poverty rate across US states. We find a significant and positive relationship between the FRASE index and poverty levels across states. Specifically, we find that a 10 percent increase in the effective federal regulatory burden on a state is associated with an approximate 2.5 percent increase in that state's poverty rate.

In the remainder of the paper, we describe the benchmark empirical poverty rate model commonly used in the development literature, from which we build our model of interest. We discuss the data used in our analysis and present the regression results and associated robustness tests before concluding.

2. The Benchmark Empirical Model

If a poverty line can be expressed as a threshold monetary value, Dhongde (2006) shows that the poverty rate (P) can be expressed as function of mean income (Y) and the Lorenz curve (ℓ) by way of the following identity:

$$P \equiv f\big(Y, \ell(Y)\big). \tag{1}$$

In practice, data on the precise distribution of income are unavailable, so a summary measure of the relative income distribution, typically the Gini coefficient, is used as a proxy for the Lorenz curve. This yields the model below, wherein ε captures variation in the poverty rate explained by the Lorenz curve but not the Gini coefficient:

$$P = g(Y, Gini) + \varepsilon. \tag{2}$$

Equation (2) represents the core functional relationship from which we derive the linear benchmark regression model. Following the development literature, this equation can easily be adapted to fit a panel framework. For example, Meng, Gregory, and Wang (2005) and Chambers, Wu, and Yao (2008) use a similar double-log benchmark model to study poverty rates in Chinese provinces:

$$p_{it} = \alpha_i + \beta_1 \eta_t + \beta_2 y_{it} + \beta_3 gini_{it} + \varepsilon_{it}, \tag{3}$$

where p_{it} is the natural log of the poverty rate; α_i is a cross-sectional fixed effect that captures idiosyncratic differences in the mean poverty rate for a province, state, or nation not otherwise explained by the other independent variables; η_t is an exogenous time trend (i.e., $\eta_t = t$); y_{it} is the natural log of mean income; $gini_{it}$ is the natural log of the Gini coefficient; and ε_{it} is a mean zero error term. Many papers in the development literature have sought to estimate the coefficient on log mean income (i.e., β_2), also known as the growth elasticity of poverty. In this strand of the literature (see, for example, Adams 2004, Ram 2007, and Chambers and Dhongde

2011), common practice is to take model (3) and transform it by way of a first difference. This exercise has the advantage of removing both the cross-sectional fixed effects (α_i) and the exogenous trend, yielding a simpler regression model:

$$\Delta p_{it} = \beta_1 + \beta_2 \Delta y_{it} + \beta_3 \Delta gini_{it} + u_{it}, \tag{4}$$

where deltas denote first differences—that is, $\Delta p_{it} = p_{it} - p_{it-1}$, $\Delta y_{it} = y_{it} - y_{it-1}$, and $\Delta gini_{it} = gini_{it} - gini_{it-1}$. In the analysis to follow, we extend both benchmark specifications to estimate the relationship between regulatory burden and poverty across the US states.[5]

3. The Regulation-Poverty Empirical Model

To estimate the impact of federal regulations on poverty across the 50 US states and the District of Columbia, we add the FRASE index to the benchmark models in section 2. Given the poverty decomposition formulated by Dhongde (2006), adding the FRASE index to the benchmark models implicitly assumes that when federal regulations are more burdensome in a given state, the result is a change in the underlying distribution of income. This assumption is consistent with the arguments of Friedman (1962) mentioned earlier. By influencing and affecting market outcomes, federal regulations likely affect the resulting income distribution (i.e., government policies help to influence the economic winners and losers). The literature also finds empirical evidence that regulations affect the overall level of output of an economy (see Dawson and Seater 2013, Crain and Crain 2014, and Coffey, McLaughlin, and Peretto 2016, among others), which suggests that including both the FRASE index and mean income in a linear regression model will likely introduce some multicollinearity. Although this effect does not bias the

[5] The decomposition of changes in poverty into changes in income distribution (inequality) and changes in mean income (growth) has a long history in development economics. It was first pioneered by Datt and Ravallion (1992) and was later used by many subsequent scholars (see, for example, Bourguignon 2003).

coefficient point estimates, it will inflate standard errors and reduce statistical significance. Adding the FRASE index to equation (3) yields the following:

$$p_{it} = \alpha_i + \beta_1 \eta_t + \beta_2 y_{it} + \beta_3 gini_{it} + \beta_4 frase_{it} + \varepsilon_{it}, \quad (5)$$

where $frase_{it}$ is the natural log of the FRASE index; the remaining variables retain their original specifications and interpretations. Adding the FRASE index to equation (4) yields the following:

$$\Delta p_{it} = \beta_0 + \beta_1 \eta_t + \beta_2 \Delta y_{it} + \beta_3 \Delta gini_{it} + \beta_4 \Delta frase_{it} + u_{it} \quad (6)$$

where $\Delta frase_{it}$ is the first difference of the natural log of the FRASE index; as before, the remaining variables retain their original specifications and interpretations.[6] Thus, equations (5) and (6) will serve as the benchmark regression models to test the empirical impact of federal regulatory burden upon the poverty rates of states.

4. The Data

The data we use on poverty come from the US Census Bureau and measure the proportion of households with incomes that fall below the poverty line, i.e., a threshold dollar amount, for a family of their size and composition. For example, in 2016, the poverty line for a four-person family consisting of two adults and two children equaled $24,339.[7] The poverty line does not vary by state, and it is adjusted annually for inflation. The data on mean income are from the BEA and equal the real per capita GDP for each state in chained 2009 dollars.[8] The Gini coefficient panel is an update of the one constructed by Frank (2009), which is derived from individual income tax filings from the Internal Revenue Service.[9]

[6] Following common practice, we retain the period fixed effect in equation (6) despite its first-difference derivation.
[7] Poverty rates and threshold values can be obtained from the Census Bureau website: http://www.census.gov/topics/income-poverty/poverty.html.
[8] Data on real per capita GDP can be accessed at the BEA website: https://www.bea.gov/regional/.
[9] The Gini panel can be downloaded from Frank's website: http://www.shsu.edu/eco_mwf/inequality.html.

Finally, we use the FRASE index, which measures the burden of federal regulations in a given state using state-specific industry weights, to determine the regulatory exposure. [10] The FRASE index relies on a combination of regulatory data from RegData and economic data from the BEA. To calculate the FRASE index score for each state, McLaughlin and Sherouse (2016) start with the number of regulatory restrictions targeting each industry, as estimated in the RegData 2.2 dataset. Those levels of industry-specific regulatory restrictions are then weighted according to each industry's importance to a particular state's private-sector economy relative to that industry's importance to the nation as a whole. Thus, if an industry contributes twice as much to a state's private sector as it does to the nation's, the restrictions count twice as much for that state. In this paper, we sum the result across all industries and scale the resulting score to that of the nation overall.

The result shows the impact of federal regulation on states relative both to the nation and to other states. A FRASE index score of 1 means that federal regulations affect a state to precisely the same degree that they affect the nation as a whole. A score greater than 1 means that federal regulations have a higher impact on the state than on the nation, whereas a score less than 1 means that they have a lower impact on the state.

The combined, balanced panel spans the period from 1997 to 2013 and includes all 50 US states plus the District of Columbia (867 observations).[11] Table 1 contains summary statistics for the benchmark dataset by state. The simple average poverty rate across the states between 1997 and 2013 equals 12.56 percent, with the highest average rate equaling 19.22 percent (Mississippi) and the lowest average rate equaling 6.91 percent (New Hampshire). The simple average real per

[10] The FRASE index can be downloaded from the Mercatus Center's RegData website: https://quantgov.org /50states/.

[11] Going forward, we will treat the District of Columbia as a state: instead of referring to the "50 US States plus the District of Columbia," we will simply refer to the group as "the states."

capita GDP across the states between 1997 and 2013 equals $46,939, with the highest average hailing from the District of Columbia ($156,401) and the lowest average coming from Mississippi ($30,641). Frank's Gini coefficients are quite large, with the average value across all the states and time periods equaling 0.59. The lowest average Gini equals 0.55 (Iowa), and the highest average equals 0.66 (both Florida and New York). Finally, the simple average value of the FRASE index across the states and time periods equals 1.22, which implies that the states, on average, experienced a relative regulatory burden between 1997 and 2013 that was 22 percent higher than the US average in 1997. The state with the highest average FRASE index is Louisiana (2.03), whereas the state with the lowest average FRASE index is New Hampshire (0.82).

Table 1. Mean Panel Values, 1997–2013

State	Poverty rate (%)	Real GDP per capita (2009)	Gini coefficient	FRASE index
Alabama	15.47	35,585	0.59	1.27
Alaska	9.46	64,084	0.58	1.99
Arizona	16.00	39,710	0.59	1.03
Arkansas	16.87	34,342	0.60	1.24
California	14.28	50,360	0.64	1.11
Colorado	10.36	49,877	0.59	1.04
Connecticut	8.81	62,613	0.64	1.19
Delaware	10.23	63,123	0.56	1.04
District of Columbia	18.48	156,401	0.62	0.91
Florida	13.19	39,544	0.66	1.01
Georgia	14.59	44,029	0.61	1.15
Hawaii	10.72	47,303	0.56	1.02
Idaho	12.31	34,372	0.61	1.23
Illinois	11.85	50,152	0.61	1.12
Indiana	11.57	42,015	0.57	1.60
Iowa	9.60	43,478	0.55	1.31
Kansas	11.85	42,317	0.58	1.42
Kentucky	15.64	37,254	0.58	1.53
Louisiana	18.01	44,826	0.62	2.03
Maine	11.54	37,335	0.56	0.95
Maryland	8.77	50,047	0.56	0.95
Massachusetts	10.66	56,986	0.61	0.93
Michigan	12.27	40,985	0.58	1.30
Minnesota	8.86	49,495	0.57	1.04
Mississippi	19.22	30,641	0.61	1.34
Missouri	12.29	41,910	0.59	1.17

Montana	14.34	34,908	0.62	1.36
Nebraska	10.28	45,982	0.59	1.35
Nevada	11.67	48,002	0.63	0.87
New Hampshire	6.91	45,391	0.57	0.82
New Jersey	8.90	54,893	0.60	1.16
New Mexico	18.85	39,232	0.60	1.23
New York	15.03	56,932	0.66	1.07
North Carolina	14.74	43,294	0.58	1.37
North Dakota	11.49	43,967	0.58	1.41
Ohio	12.40	42,964	0.56	1.20
Oklahoma	14.19	37,013	0.60	1.37
Oregon	12.65	43,080	0.58	1.00
Pennsylvania	11.03	43,997	0.59	1.14
Rhode Island	11.79	44,282	0.57	0.84
South Carolina	14.30	36,335	0.59	1.13
South Dakota	11.89	41,410	0.61	1.28
Tennessee	15.16	40,331	0.60	1.19
Texas	16.38	46,741	0.63	1.49
Utah	9.20	40,785	0.58	1.09
Vermont	9.45	39,484	0.58	0.96
Virginia	9.74	49,809	0.57	1.09
Washington	10.73	51,363	0.58	1.31
West Virginia	16.09	33,219	0.56	1.61
Wisconsin	10.06	43,523	0.56	1.04
Wyoming	10.38	58,184	0.63	1.99

Source: Author calculations based on the FRASE index.

As a preliminary step, we calculate the correlation matrix for poverty, real per capita income, the Gini coefficient, and the FRASE index, all expressed as natural logarithms. The results (see table 2), though only anecdotal, are consistent with our prior expectations. Specifically, poverty is negatively correlated with log per capita income (−0.146), implying that states with higher mean incomes exhibit less poverty. Likewise, log poverty is positively correlated with the log of the Gini coefficient (0.340), consistent with the notion that as income inequality rises, absolute living standards for the poorest households decline, thus increasing the poverty rate. Finally, log poverty is also positively correlated with the log of the FRASE index (0.335), implying that states that are effectively more federally regulated also possess higher poverty rates.

Table 2. Panel Correlation Table

	Log poverty rate	Log output	Log Gini	Log FRASE
Log poverty rate	1.000	−0.146	0.340	0.335
Log output	−0.146	1.000	0.199	−0.055
Log Gini	0.340	0.199	1.000	0.227
Log FRASE	0.335	−0.055	0.227	1.000

Source: Author calculations.

5. Benchmark Estimation Results

5.1. Estimation Results for Equation (5)

Table 3 reports the estimation results for five variants of equation (5). In column (1), the log poverty rate is regressed on a pooled constant (not reported), the log of the FRASE index, the log GDP per capita, and the log Gini coefficient. In line with prior expectations, the coefficient on the log FRASE index (0.2879) is positive and statistically significant at the 1 percent level. This finding implies that a 1 percent increase in binding federal regulations is associated with a 0.2879 percent increase in the poverty rate. The coefficient on the log output has the appropriate sign (−0.2113) and is statistically significant at the 1 percent level, implying that a 1 percent increase in output reduces the poverty rate by just over 0.2 percent. Finally, the coefficient on the log Gini coefficient is positive and statistically significant at the 1 percent level (1.4849), implying that a 1 percent increase in income inequality increases the poverty rate by 1.4849 percent.

Column (2) is the same as column (1) but includes a time trend, as is common practice in the literature. The estimation results change very little: the coefficient on the log FRASE index equals 0.2596 and is significant at the 1 percent level. The coefficients on the log output and the log Gini coefficient are nearly unchanged, and both remain statistically significant at the 1 percent level. The added time trend is statistically insignificant.

Table 3. Equation (5) Estimation Results

Variables	(1)	(2)	(3)	(4)	(5)
Log FRASE	0.2879***	0.2596***	0.2504***	0.2125**	0.2373***
	(0.0390)	(0.0170)	(0.0205)	(0.0929)	(0.0903)
Log output	−0.2113***	−0.2224***	−0.2075***	−1.0313***	−0.8060***
	(0.0237)	(0.0241)	(0.0277)	(0.1164)	(0.0684)
Log Gini	1.4849***	1.4057***	1.6036***	−0.0543	−0.0087
	(0.1014)	(0.1368)	(0.1865)	(0.1223)	(0.1037)
Time trend	—	0.0034	—	0.0200***	—
	—	(0.0037)	—	(0.0037)	—
Fixed state effects	No	No	No	Yes	Yes
Fixed period effects	No	No	Yes	No	Yes
Observations	867	867	867	867	867
Goodness of fit	0.222	0.224	0.277	0.837	0.860

Notes: (1) Dependent variable is the log of the poverty rate; (2) intercept included but not reported; (3) White robust cross-section standard errors in parentheses; (4) ***, **, and * denote 1 percent, 5 percent, and 10 percent statistical significance, respectively.

Column (3) is similar to column (2), but fixed period effects replace the time trend. The coefficient on the log FRASE index is virtually unchanged and remains statistically significant at the 1 percent level. The coefficient on the log output also changes very little and remains statistically significant. The coefficient on the log Gini coefficient remains significant at the 1 percent level but increases in magnitude to 1.6036.

Columns (4) and (5) include state fixed effects. The overall goodness of fit of these models ranges from 0.837 to 0.860, much larger than the R^2 values reported in the first three columns (0.222 to 0.277), which ignore state-specific heterogeneity in the poverty rate. Column (4) includes a time trend, whereas column (5) uses fixed time period effects. In column (4), the coefficient on the log FRASE index equals 0.2125 and is significant at the 5 percent level. This finding is similar to that in column (5), in which the coefficient on the log FRASE index equals 0.2373 and is statistically significant at the 1 percent level. In both columns (4) and (5), the

coefficient estimate on the log output is negative and statistically significant at the 1 percent level, ranging in estimated value from −0.8060 to −1.0313. This finding implies that a 1 percent increase in the log per capita output reduces poverty by 0.8060 percent to 1.0313 percent. Finally, the coefficient on the log Gini coefficient is statistically insignificant in both columns (4) and (5). The coefficient on the time trend in column (4) is positive and statistically significant (0.02), implying that poverty rates are drifting 2 percent higher each year, all else being equal.

5.2. Estimation Results for Equation (6)

Column (1) of table 4 reports the estimation results for the baseline version of equation (6). Because taking the first difference of the model's variables eliminates state heterogeneity, only fixed *period* effects are considered.[12] The coefficient on the first difference of the log FRASE index (0.2944) is statistically significant at the 5 percent level and in line with the previous results from equation (5), suggesting that a 1 percent increase in binding regulations is associated with an approximate 0.3 percent increase in the poverty rate. The coefficient on the first difference of the log output is negative but statistically insignificant. Likewise, the coefficient on the first difference of the log Gini coefficient has the correct sign but is also statistically insignificant.

[12] Any exogenous trend variables become constants.

Table 4. Estimation Results for Equations (6)–(9)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Δ (log FRASE)	0.2944**	0.2752**	0.3169**	0.2332*	0.3195**	0.2338*	0.2822**	0.2845**
	(0.136)	(0.1339)	(0.1315)	(0.1251)	(0.1336)	(0.1267)	(0.1222)	(0.1235)
Δ (log output)	−0.1102	−0.0701	−0.1035	−0.0837	−0.0614	−0.0693	−0.1065	−0.0609
	(0.1752)	(0.2329)	(0.1871)	(0.1702)	(0.2533)	(0.2322)	(0.1866)	(0.2527)
Δ (log Gini)	0.1825	0.0071	0.0347	−0.0063	0.0348	−0.0062	0.0242	0.0242
	(0.288)	(0.2840)	(0.2942)	(0.2875)	(0.2937)	(0.2877)	(0.2976)	(0.2971)
Δ (log government)	—	0.0120	—	—	0.0522	0.0180	—	0.0566
	—	(0.1385)	—	—	(0.1397)	(0.1395)	—	(0.141)
Δ (log high school)	—	—	0.5025	—	0.5064	—	0.4933	0.4974
	—		(0.5814)	—	(0.5757)	—	(0.5813)	(0.5757)
Δ (log agriculture)	—	—	—	0.0332	—	0.0334	0.0279	0.0284
	—	—	—	(0.0257)	—	(0.0262)	(0.0263)	(0.0269)
Observations	816	800	750	800	750	800	750	750
Goodness of fit	0.114	0.111	0.118	0.112	0.118	0.112	0.119	0.119

Notes: (1) Dependent variable is the first difference of the log poverty rate; (2) period fixed effects and intercept included but not reported; (3) White robust cross-section standard errors in parentheses; (4) ***, **, and * denote 1 percent, 5 percent, and 10 percent statistical significance, respectively.

6. Robustness Results

To ensure that our results are robust to the inclusion of other independent variables, we add three additional explanatory variables common to the poverty literature. Regardless of how these additional explanatory variables are added (individually, in pairs, or as a group), the regulation coefficient is consistent in sign and magnitude, averaging 0.2779, and statistically significant in all cases. In other words, a 1 percent increase in binding federal regulations is associated with increases in state-level poverty rates of just under 0.28 percent, which is consistent with our findings from the baseline model.

6.1. Government Expenditures

Following Chambers, Wu, and Yao (2008), we include the size of public expenditures relative to the size of the state economy as a proxy for the relative provision of public services and public goods and the overall size and scope of government within each state economy.[13] The resulting model, which builds on equation (6), is specified as follows:

$$\Delta p_{it} = \beta_1 + \beta_2 \Delta y_{it} + \beta_3 \Delta gini_{it} + \beta_4 \Delta frase_{it} + \beta_5 \Delta gov_{it} + \eta_t + u_{it}, \qquad (7)$$

where Δgov_{it} is the first difference of the log of state government expenditures as a fraction of state GDP and η_t is a fixed-effect time period dummy. Estimation results are provided in column (2) of table 4. Focusing on the variable of interest, the coefficient estimate on the first difference of the log of the FRASE index equals 0.2752 and is statistically significant at the 5 percent level. This is very consistent with the previous estimation results and suggests that a 1 percent increase in binding federal regulations is associated with increases in the state poverty rate of just under 0.28 percent.

[13] Government expenditures and state GDP data are obtained from the US BEA.

6.2. Human Capital

Following Chambers, Wu, and Yao (2008); Apergis, Dincer, and Payne (2011); and Johnson, Formby, and Kim (2011), we include a measure of educational attainment as a proxy for human capital levels within each state. In principle, states with more human capital should have less structural unemployment, higher labor force participation rates, and higher real earnings.[14] The resulting model, which builds on equation (6), is specified as follows:

$$\Delta p_{it} = \beta_1 + \beta_2 \Delta y_{it} + \beta_3 \Delta gini_{it} + \beta_4 \Delta frase_{it} + \beta_5 \Delta education_{it} + \eta_t + u_{it}, \qquad (8)$$

where $\Delta education_{it}$ is the first difference of the log of the high school completion rate (given as a percentage) and η_t is a fixed effect time period dummy. Estimation results are provided in column (3) of table 4. Focusing on the variable of interest, we find that the coefficient estimate on the first difference of the log of the FRASE index equals 0.3169 and is statistically significant at the 5 percent level. This finding is very consistent with the previous estimation results and suggests that a 1 percent increase in binding federal regulations is associated with increases in the state poverty rate of just under 0.32 percent.

6.3. Agriculture

Following Chambers, Wu, and Yao (2008), we include a measure of the relative size of the agricultural sector within each state. Given that highly agrarian and rural economies have lower wages and greater seasonality in employment patterns, we anticipate a positive relationship between the relative size of the agricultural sector and the poverty rate.[15] The resulting model, which builds on equation (6), is specified as follows:

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[14] High school completion rate data are from the US Census Bureau and can be accessed at https://www.census.gov /topics/education/educational-attainment/data.html.

[15] Agricultural output (North American Industry Classification System sector 11) and state GDP data are obtained from the US BEA.

$$\Delta p_{it} = \beta_1 + \beta_2 \Delta y_{it} + \beta_3 \Delta gini_{it} + \beta_4 \Delta frase_{it} + \beta_5 \Delta agriculture_{it} + \eta_t + u_{it}, \quad (9)$$

where $\Delta agriculture_{it}$ is the first difference of the log of the output of the agricultural sector as a percentage of state GDP and η_t is a fixed effect time period dummy. Estimation results are provided in column (4) of table 4. Focusing on the variable of interest, we note that the coefficient estimate on the first difference of the log of the FRASE index equals 0.2332 and is statistically significant at the 10 percent level. This finding is very consistent with the previous estimation results and suggests that a 1 percent increase in binding federal regulations is associated with increases in the state poverty rate of just over 0.23 percent.

6.4. Combined Effects

As a final robustness exercise, we include every pairing of the above explanatory variables (i.e., government expenditures, high school completion rates, and the relative size of the agricultural sector) in columns (5) to (7). The resulting coefficient estimates on the FRASE index range in value from 0.2338 to 0.3195 and are universally statistically significant. Finally, we include all three of these robustness variables in the augmented model (see column (8)). The resulting coefficient on the FRASE index equals 0.2845 and is statistically significant at the 5 percent level.

7. Conclusion

Consistent with economic theory, previous empirical research has documented that regulations reduce real incomes and regressively affect consumer prices, entrepreneurship, and income inequality. Given these demonstrable effects, it is not unreasonable to suspect that regulations also increase poverty rates. However, no study has provided a comprehensive analysis of the impact of regulation on poverty.

This paper fills this gap in the literature by being the first to examine the impact of federal regulations on poverty within the United States. Until recently, however, empirically estimating this relationship was impossible because of the unavailability of state-level regulatory data. But we use the FRASE index, which ranks the 50 states and the District of Columbia according to how federal regulations affect each state. Controlling for a large number of other factors known to influence poverty rates, we find a robust, positive, and statistically significant relationship between the FRASE index and the poverty rates across states. Specifically, we find that a 10 percent increase in the effective federal regulatory burden on a state is linearly correlated with an approximate 2.5 percent increase in that state's poverty rate. Although our analysis does not necessarily demonstrate a causal relationship, we find the relationship between federal regulation and state poverty rates to be robust to the inclusion of other explanatory variables common to the poverty literature, including government expenditures, human capital, and the relative size of the agricultural sector in each state. Consequently, we argue that there is a neglected and unappreciated connection between regulatory policy and poverty rates that policymakers and regulators should consider when drafting new rules.

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Examination of the Effects of Regulatory Policy on the Economy and Business Growth

Testimony by

Karen Kerrigan
President & CEO
Small Business & Entrepreneurship Council

Before the

Subcommittee on Regulatory Affairs and Federal Management
Committee on Homeland Security and Government Affairs
United States Senate

September 27, 2018

The Honorable James Lankford, Chairman
The Honorable Heidi Heitkamp, Ranking Member

Protecting small business, promoting entrepreneurship

Chairman Lankford, Ranking Member Heitkamp and members of the subcommittee, thank you for holding this important hearing today and for the opportunity to provide testimony on the effects of regulatory policy on the economy and business growth. The Small Business & Entrepreneurship Council (SBE Council) is encouraged by the fact that federal agencies are taking steps to streamline and modernize rules, and examining how regulation may be impacting U.S. entrepreneurship and small business growth. The general direction of policy as well as a recent series of reform initiatives have helped to improve the U.S. policy ecosystem, and in turn have enabled startup activity and strong small business growth across the United States.

My name is Karen Kerrigan and I serve as President & CEO of SBE Council - a nonprofit, nonpartisan advocacy, research and education organization dedicated to protecting small business and promoting entrepreneurship. For nearly 25 years, SBE Council has worked on a range of private sector and public policy initiatives to strengthen the ecosystem for healthy startup activity and small business growth. In addition to research and advocacy, SBE Council provides educational tools and content to help startups, small businesses, and entrepreneurs better compete and succeed in the marketplace.

The direction of regulatory policy over the past eighteen months or more has had a positive impact on the economy and small businesses. Regulatory relief along with a lighter volume of new regulation have helped to markedly improve small business confidence and the outlook of entrepreneurs, which has translated into a better business environment, higher sales and revenues for small businesses, and expansion and growth opportunities for these firms. Policy matters for small businesses, and they view the current regulatory path as being a constructive one that has allowed them to focus more intently on business growth and take additional risk.

Small Businesses Are Confident

When it comes to small business confidence, various surveys show comparable findings: It is exceptionally high.

• According to the third quarter **2018 Wells Fargo/Gallup Small Business Index** survey (released on August 7, 2018), "small business optimism is at an all-time high." The report indicated that optimism has reached its highest level in the survey's 15-year history, as reflected in small business owner attitude about their finances and projected cash flow: "78 percent of small business owners reported their financial situation today is very or somewhat good, and 84 percent of business owners said they expect their financial situation will be very or somewhat good a year from now… Over the next year, 77 percent expect their cash flow to be very or somewhat good." According to the report, credit conditions have also vastly improved.

• The **NFIB's Small Business Optimism Index for August 2018** found that optimism reached a new record in the survey's 45-year history, "topping the July 1983 highwater mark." According to the report, high optimism is "driven by small business owners executing on the plans they've put in place due to dramatic changes in the nation's economic policy."

• The **Spring 2018 Bank of America Business Advantage Small Business Report** (released April 26, 2018) reported that "confidence in the economy – both at the national and local levels – is the highest it's been since 2015 and the second-highest in the history of the report."

An important take-a-way from these reports is that small business confidence has stayed strong and consistent for a solid stretch of time, which is creating a virtuous circle of activity - such as expansion, hiring, wage increases and investment – all of which are critical for innovation, higher quality jobs, and the overall economy and its competitiveness. It is essential that elected officials and policymakers stay on a reform-minded path, as stability and consistency will help to sustain the stronger growth and confidence we are experiencing, and ensure that individuals and families left behind benefit from this period of growth.

Regulatory Signals

For small businesses, the change in the direction on regulatory policy has been a welcome development. The President's Executive Orders on streamlining regulation and cutting red tape (**EO 13771** and **EO 13777**), combined with actions by the Congress on broad regulatory reform, and in specific areas (like reforms to improve capital access, for example) have made good on the regulatory signals that were sent to small business owners about where federal policy and actions would be headed at the beginning of the new Administration and during the 115th Congress. These signals, and subsequent action, have provided a very powerful boost to entrepreneurs and small businesses.

As we know, Executive Orders (EOs) come and go with each Administration and as we've experienced over the past twenty-five years in our work with four different Administrations, presidential leadership is critical to ensuring EOs are followed, implemented and sustained. SBE Council has seen meaningful action by the agencies to fulfill President Trump's directives to reduce red tape and examine existing rules for potential modernization, streamlining or repeal. SBE Council staff and our members have participated in many roundtable meetings and events to provide our ideas and feedback on reforms. And we are pleased that small business participation specifically is driving momentum for important reforms that address the pain points of small businesses, such as access to capital, affordable health coverage, and regulatory excess or uncertainties that have harmed small firms in specific industries.

We are very pleased that the Small Business Administration (SBA) Office of Advocacy has stepped up to assist with these regulatory policy EOs by weighing in as an independent voice and platform for action for small businesses. Advocacy has conducted significant outreach to small businesses in order to identify regulations for federal agencies and departments that are ripe for relief and reform. This activity is ongoing and has been very effective.

For example, in direct response to EO 13771 and EO 13777, Advocacy is making sure that entrepreneurs and small business owners are being heard by hosting **regional roundtables** as well as through an **online portal to collect ideas and suggestion for regulatory changes**. SBE Council is very active in promoting these activities, as we are confident that Advocacy will finish the job by making sure the appropriate regulatory agencies and/or staff "hear" the specific concerns and ideas of small business owners.

As we have observed by reading Advocacy's ongoing reports regarding their engagement with small business owners, they are hearing what SBE Council hears from small business owners on a daily basis – that entrepreneurs understand some regulation is necessary, but federal rules need to be fair, practical, right-sized and take into consideration the compliance burden that regulation imposes on small firms because they have limited resources and are disproportionately impacted by regulation.

The list of regulations identified by small business owners at these regional roundtables held over the past thirteen months cover a very wide range. But this should come as no surprise to those who understand the role that small businesses play in the U.S. economy, as they dominate almost every sector.

At these events, small business owners representing various industries addressed how specific regulations – whether described as outdated, inappropriate, too restrictive or one-size-fits-all - undercut their competitiveness and make business operations more costly or difficult. In total (and this does not include comments provided via the online portal) at least 24 different agencies are mentioned, covering scores and scores of regulations. I commend the SBA Office and Advocacy, under the leadership of Acting Chief Counsel Major Clark, for this important work. The office is posting reports on a timely basis and communicating the findings from these roundtables to the leaders of federal agencies and departments, which include the specific regulations identified by small businesses (and how they might be reformed) so that government officials can make informed decisions about additional steps that lead to changes.

The SBA Office of Advocacy has been an enduring bright spot for small businesses across Administrations and that is why we have supported reforms that increase their capacity, and therefore their positive impact for small businesses.

Small Business and Effective Regulatory Reform

While "government regulation" has diminished as a top concern for many small business owners, it is still viewed as overbearing by a sizable portion of the small business community. For example, in an August 2018 **Bi-Annual Trends Report** from Small Business Expo, more than half or 51% of respondents said there is too much government regulation. Forty-two percent of business owners say there are just enough regulations, and seven percent believe there isn't enough. We also have to keep in mind that regulatory burden varies greatly by industry and the location of a small business. Some states and localities impose a greater volume of regulation and mandates on businesses than others – which translate into higher costs.

A less onerous regulatory environment is ideal for entrepreneurship and strong small business growth. This has become a widely shared principle that has spurred countries across the globe to improve their regulatory systems. As noted by Kristalina Georgieva, Chief Executive Officer, The World Bank in a foreword for the **"Doing Business 2018"** report, which presents quantitative indicators on business regulation and the protection of property rights across 190 economies: "Over the past decade, more than 60 economies have established regulatory reform committees that use the Doing Business indicators. As a result, governments have reported more than 3,180 regulatory reforms, including about 920 reforms that have been inspired by Doing Business."

These reforms have largely been inspired, and led, by business leaders and government officials in these many countries who understand that it is important to lower government barriers to encourage investment and entrepreneurship. In addition to my work with SBE Council advocating for U.S. entrepreneurs and small businesses, I have traveled to many countries to help government leaders understand, create and implement policies to encourage entrepreneurship and small business growth. The good news is that massive reforms have been enacted across the globe to help spur entrepreneurship, attract foreign investment, and enable capital formation. In terms of the U.S., it is important that we never become complacent in this regard. We must continually improve our policy environment, and that includes our regulatory systems. As small business owners have been stating for many years, the federal regulatory system is often unresponsive to the needs of startups and small businesses and regulators need to seek their input at the front end of the regulatory process and continually review what is on the books.

That is why SBE Council strongly supports the regulatory reform measures advanced by the Homeland Security and Government Affairs Committee, including the "Small Business Regulatory Flexibility Improvements Act" (S.584), which builds upon the success of the Regulatory Flexibility Act (RFA). It creates a more uniform process by which the RFA would apply to proposed rules, and its broader application and measures would result in smarter regulation and a more accountable regulatory system for small businesses. Even though the RFA has been inconsistently applied or ignored over the years, it has still saved small businesses billions (more than $130 billion) in regulatory costs since these savings started to be quantified in 1998. (According to the SBA Office of Advocacy in its **Report on the Regulatory Flexibility Act, FY 2017,** $913.4 million in regulatory cost savings were realized for small businesses in 2017.) SBE Council believes the federal government can do better.

For regulations to be small-business friendly, the process must be an informed one that incorporates relevant information and data regarding their impact and practicality. Small businesses must be included in this process, and all agencies need to abide by this framework. S.584 does this by:

• Requiring a full economic impact of proposed regulations by including both direct and indirect effects that are "reasonable foreseeable."

• Modifying the rulemaking process to include an initial regulatory flexibility analysis requiring each to contain more detailed information about a proposed rule, including why agency action is being considered; the objectives and legal basis for the proposed rule; an estimate of the number and types of small entities to which the proposed rule will apply; the projected compliance requirements and the type of professional skills needed for such reporting; a list of existing federal rules that may duplicate, overlap or conflict with the proposed rule; the estimated cumulative impact (by agency) of the proposed rule; the disproportionate impact that a proposed rule may have on small businesses; and whether the proposed rule may impact access to credit.

• Including within the final regulatory flexibility analysis a detailed description of any disproportionate economic impact on small entities or a specific class of small entities, the agency's response to comments for certification, a detailed statement including an economic

assessment (a quantifiable or numerical description of the effects of the proposed or final rule and alternatives to the proposed or final rule) to support certification (or why quantification or numerical description is not practical or reliable), and readily available access to the analysis by the public.

• Increasing the power and oversight authority for the Chief Counsel for Advocacy of the SBA to more effectively monitor the regulatory process for small businesses, obtain data related to impact and costs (including the effect of a proposed rule on startups), and engage with all relevant parties to ensure requirements are being fulfilled.

• A periodic review of the rules, which includes the direct engagement of the small business community and agency accountability regarding the process and outcome of the review.

• The waiver of fines for first-time violations of paperwork requirements by small businesses.

• Soliciting input from affected small businesses or associations of small entities in preparing compliance guides.

• Bringing IRS regulations under the RFA and SBREFA requirements.

Sustaining Robust Growth

Along with strong small business optimism, the economy has improved markedly under policies that have unleashed investment and more risk-taking activity. Sound regulatory policy is a vital to encouraging this productive activity and sustainable growth. Recent economic indicators continue to be very positive:

• The July **personal income report** from the U.S. Bureau of Economic Analysis (BEA) released on August 30, continues a streak in growth which reinforces the growing strength of the U.S. economy. Since July 2016, real per capita disposable income experienced growth in 23 of the last 25 months with now 13 straight months of growth, rising from $42,726 (in 2012 dollars) in June 2017 to $43,769 in July 2018.

• The BEA released its **second estimate of second quarter GDP** on August 29th. The topline revision of real GDP growth was positive, with the second quarter growth rate estimate moving from 4.1 percent to 4.2 percent. **In a review of this data,** SBE Council chief economist Raymond Keating observed that strong business investment (revised up from 7.3 percent to 8.5 percent in the second quarter) was a key component of this upward revision. Strong investment means business owners and entrepreneurs are confident, which helps to strengthen productivity and wages.

• The Federal Deposit Insurance Corporation's (FDIC's) **latest quarterly banking profile** (released on August 23) shows that Community Banks are performing well, which is good news for small business lending. In fact, according to the FDIC report, small business lending has been on the rise with small commercial and industrial, and nonfarm nonresidential (properties) loan balances at $632.5 billion in the second quarter. That was up from the end of 2017 ($623 billion), and compared to $618.7 billion a year earlier.

• The Bureau of Labor Statistics (BLS) September 7 **second quarter productivity report** (revised only slightly from the preliminary estimate in mid-August) shows rising productivity. Specifically, productivity rose by an annualized 2.9 percent rate, the best productivity performance since the first quarter of 2015, and a big step up from 0.3 percent in the first quarter and -0.3 percent in the fourth quarter 2017.

• As noted by Kevin Hassett, Chairman of the Council of Economic Advisors, in a September 10 report on the economy, new businesses **as measured by applications for an employer identification number (EIN)** have steadily increased on a quarterly basis with a surge in new activity, particularly in 2018. For example, EIN applications increased from 704,961 in 2015 Q1, to 725,012 in 2016 Q1, to 771,445 in 2017 Q1, to 852,991 in 2018 Q1.

This fertile environment consisting of strong investment, solid consumer confidence, increased startup activity, improved revenues and sales for small businesses, an uptick in wages and stronger lending can be sustained with policies that generate certainty for businesses. Entrepreneurs and small business owners have a very favorable outlook moving forward, and SBE Council appreciates the work of this subcommittee and its leaders who have helped to create the environment for entrepreneurial success and wish to do more on the regulatory reform front to ensure economic growth and opportunity are sustained over the long term.

Respectfully submitted by,

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Protecting Small Business, Promoting Entrepreneurship

PREPARED STATEMENT OF MARIA GHAZAL

SENIOR VICE PRESIDENT AND COUNSEL

BUSINESS ROUNDTABLE

"EXAMINATION OF THE EFFECTS OF REGULATORY POLICY ON THE ECONOMY AND BUSINESS GROWTH"

Before the

U.S. SENATE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

SUBCOMMITTEE ON REGULATORY AFFAIRS AND FEDERAL MANAGEMENT

September 27, 2018

Good morning, Chairman Lankford, Ranking Member Heitkamp and Members of the Subcommittee. I am Maria Ghazal, Senior Vice President and Counsel of Business Roundtable. Thank you for inviting me to this important hearing to examine the effects of regulatory policy on the economy, business investment, economic growth and job creation. On this 10th anniversary of the beginning of the financial crisis, it is timely to look at policies that drive economic growth. I appreciate the opportunity to share with you the perspective of Business Roundtable.

Business Roundtable is an association of Chief Executive Officers (CEOs) of America's leading companies working to promote a thriving U.S. economy and expanded opportunity for all Americans through sound public policy. Business Roundtable is the only national organization that exclusively represents chief executive officers. These CEO members lead companies with more than 14 million employees and more than $7 trillion in annual revenues. As major employers in every state, Business Roundtable CEOs are responsible for creating quality jobs with good wages.

Business Roundtable supports a smarter approach to regulation – one that meets regulatory goals and promotes innovation, economic growth and job creation. We call this approach "smart regulation," and Business Roundtable formed a Committee focused exclusively on the topic. I oversee policy development and advocacy for this Committee.

My testimony explains how smart regulation can be achieved by reforming three areas: the process by which the federal government issues regulations and guidance; the degree of overlap between agency regulatory jurisdictions; and the system for permitting major infrastructure projects. The Trump Administration is taking major steps to improve each of these three areas. I will describe how the Administration's actions are already producing improvements. I will then highlight ways in which Congress — starting with this Subcommittee — can codify and extend those actions.

How to Promote Smart Regulation

Federal regulations can ensure that all Americans can enjoy a clean environment; safe workplaces; fair treatment; quality health care; access to healthy food and water; and protection from unscrupulous, unfair or predatory business practices. But, too often federal regulatory and permitting processes unnecessarily discourage innovation and investment. Improvements are needed in three key areas:

I. Improve the Regulatory Process

The first needed improvement is ***systematic reform of the process by which the federal government produces regulations and guidance documents***. At present, the current system obstructs innovation, investment and compliance. Agencies often impose rigid one-size-fits-all requirements that cut off promising opportunities, or impose overly prescriptive rules that prevent better solutions. The current regulatory process also creates uncertainty. If companies

do not know what regulators will do, they understandably are reluctant to undertake major investments that often take years, if not decades, to execute and bear fruit. Finally, individual rules can also impose costs of hundreds of millions — or even billions — of dollars on consumers, companies and other organizations each year. And while any individual regulation might be cost-effective, the cumulative impact of *all* regulations can be overwhelming.

While a wide variety of process reforms would improve the manner in which federal agencies produce regulations and guidance, the most essential elements are:

- Objective analysis to ensure that regulations are based on the best available information, to carefully and transparently consider the costs and benefits of proposed rules, and to make sure that the benefits justify the costs;
- Early engagement with the affected stakeholders prior to development of a proposed rule, to better understand the issues involved and to gather recommendations for achieving regulatory goals most cost-effectively; and
- Mechanisms for agencies to receive information and feedback from the regulated community about how well existing regulations are accomplishing their regulatory objectives.

Together these actions — in effect, an improved quality control system for federal regulation — will best ensure that regulations are well-constructed, narrowly tailored, supported by sound science and analysis, and fit for their intended purpose.

II. Reduce Regulatory Redundancy and Overlap

The second needed improvement is to ***reduce and rationalize the widespread jurisdictional overlaps among U.S. regulatory agencies.*** Too often, firms find themselves subject to multiple regulatory requirements from multiple agencies on a single issue, resulting in inefficiencies and higher compliance costs. In some cases, agencies may promulgate rules that are duplicative, inconsistent or conflicting, which leads to costs that reduce hiring and business investment. Reform will require Congress to allocate agency jurisdictions more clearly. Congress could also encourage a variety of helpful practices among agencies, such as negotiating memoranda of understanding. Business Roundtable will release a white paper later this year describing the problem of regulatory overlap, the negative effect this overlap has on U.S. businesses, and constructive solutions for both regulatory agencies and Congress to consider.

III. Streamline and Expedite Permitting

The third needed improvement is to ***streamline and expedite environmental reviews and other approval processes for major infrastructure projects***. Business Roundtable CEOs strongly advocate changes that will "simplify, streamline and accelerate America's permitting process with the goal of encouraging large-scale capital investments in the U.S. economy while

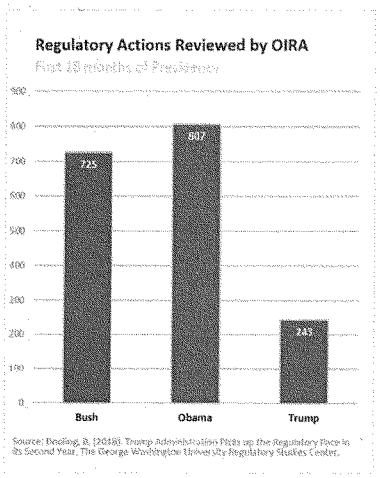
maintaining the nation's commitments to health, safety and soundness."[1] Gaining approval to build a new bridge or factory typically involves review by multiple federal agencies with overlapping jurisdictions and no real deadlines. Often, no single federal entity is responsible for managing the process or has the power to compel other agencies to act promptly. Even after a project is granted permits, lawsuits can still hold things up for years — or, worse, halt a half-completed construction project.

Congress took a huge step forward when it passed title XLI of the Fixing America's Surface Transportation Act, generally referred to as FAST-41[2] — a bipartisan bill that originated in this committee.[3] But there is room for improvement, including extending FAST-41 reforms to a wider universe of projects and setting a presumptive deadline for reviews.

The Trump Administration's Actions Thus Far

Reforming the Regulatory Process

The President made reducing regulatory burden one of his first priorities, and the Administration has made progress in that regard. One of the President's first Executive Orders (E.O. 13771) was to establish a 1-in, 2-out goal for every significant regulation proposed. By the end of FY 2017, the Administration had eliminated 67 regulations and adopted only three significant new regulations. As of mid-December 2017, the Administration withdrew or delayed 1,579 rulemakings listed in the previous Administration's regulatory agenda. For FY 2018, the Administration announced plans to eliminate an additional 434 regulations while issuing 131. According to the Office of Management and Budget (OMB), $8.1 billion in regulatory savings were achieved in FY 2017 and nearly $10 billion in savings are being forecast for FY 2018. The Administration did not provide any updated data when it released its Spring 2018 Regulatory Agenda, but a recent study found that, in the first 18 months of the Trump Administration, the number of significant proposed or final rules reviewed by the OMB fell by 70 percent from the same period under the previous



[1] *See* Business Roundtable, *Permitting Jobs and Business Investment: Streamlining the Federal Permitting Process* (April 2012) at 3. This report may be accessed at: https://www.businessroundtable.org/sites/default/files/2012_04_23_BRT_Permitting_Jobs_and_Business_Investment.pdf.

[2] 42 U.S.C. § 4370m *et. seq.* (2015).

[3] Similar reforms are embodied in the Water Resources Development Act (WRDA) (included as part of the Water Infrastructure Improvement for the Nation Act, Pub. L. No. 114-322, § 1156 *et seq.*), for water resources projects, and the balance of the FAST Act (Pub. L. No. 114-94), for surface transportation projects.

Administration, and fell more than 50 percent from the same period under the George W. Bush Administration (see graph).[4]

The President also issued an Executive Order (E.O. 13777) institutionalizing his regulatory reform agenda by requiring each agency to designate a Regulatory Reform Officer responsible for reviewing current regulations and making recommendations on how to modify them. Agencies are also required to solicit public comment on regulations in need of repeal or reform. Business Roundtable submitted comments on several regulations.

The Administration also broke new ground when the Treasury Department and OMB issued a memorandum of agreement under which the OMB's Office of Information and Regulatory Affairs (OIRA) will review certain tax regulations. Further, the Environmental Protection Agency solicited early input on whether it should propose a rule to standardize its conduct of cost-benefit analyses for significant rulemakings.[5]

Business Roundtable members are encouraged by these actions and believe the Administration is serious about reducing cumulative regulatory burdens. Every year since 2002, Business Roundtable has surveyed its member CEOs about their expectations for their companies' sales, capital spending and employment over the following six months. In the fourth quarter of the year, CEOs are also asked to rank the most significant cost pressures their companies face. Beginning in 2012, CEOs cited regulatory costs as the top cost pressure for five consecutive years. Last year, however, regulatory costs slipped to the second-largest cost pressure, overtaken by labor costs.[6] We suspect the Administration's emphasis on reducing the regulatory burden facing U.S. businesses is a significant driver of this result.

More generally, Executive Orders 13771 and 13777 have effectively limited new significant rulemaking to those that are really necessary (e.g., required by statute or national security considerations). This dramatic shift in regulatory philosophy has reduced regulatory costs and allowed our members to make decisions in a more certain, predictable environment. The result is heightened optimism in the business community as well as the overall economy, as is evident in a variety of business confidence indices (including the Business Roundtable CEO Economic Outlook, which reached an all-time high earlier this year).[7] The Dow Jones Industrial Average and the S&P 500 continue to reach record highs, unemployment has fallen in 2018 to its lowest level since late 2000, and initial jobless claims are at their lowest point since the late 1960s.

Addressing the Problem of Regulatory Overlap

In March 2017, the President instructed the OMB to develop a plan to improve the efficiency,

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[4] Bridget C.E. Dooling, "Trump Administration Picks up the Regulatory Pace in its Second Year – Overall Pace Still Dramatically Slower than Prior Administrations," GW Regulatory Studies Center Regulatory Insight (Aug. 1, 2018), available at https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs1866/f/downloads/Dooling_Trump%27sFirst18Months.pdf.
[5] 83 Fed. Reg. 27524 (June 13, 2018). Business Roundtable filed comments in this docket. *See* https://www.regulations.gov/document?D=EPA-HQ-OA-2018-0107-1186.
[6] *See* https://www.businessroundtable.org/resources/ceo-survey/2017-Q4.
[7] *See* https://www.businessroundtable.org/resources/ceo-survey/2018-Q1.

effectiveness and accountability of federal agencies by, among other things, eliminating or reorganizing unnecessary or redundant federal agencies. The result was a report, released this past June, "Delivering Government Solutions in the 21st Century."[8] Noting that "[m]any Federal organizations are effectively fulfilling their missions and serving citizens but doing so in ways that duplicate other Federal activities,"[9] the plan proposes 32 structural reforms of the federal government. These include, for example, consolidating the food safety responsibilities of the Food & Drug Administration and the U.S. Department of Agriculture (USDA) within the USDA. As the report describes, while "some of the proposals are ready for agency implementation, others establish a vision for the Executive Branch that will require further exploration and partnership with the Congress."[10]

Individual agencies are also taking steps to rationalize their operations. A good example is the recent memorandum of understanding executed by the Federal Energy Regulatory Commission (FERC) and the Department of Transportation's Pipeline and Hazardous Materials Safety Administration to rationalize the safety review of liquefied natural gas pipelines during FERC permitting processes.[11]

Individual Business Roundtable members have expressed enthusiasm about both the food safety and pipeline safety reforms noted above, and our membership is optimistic that the Administration may be able to make significantly more progress on reducing regulatory overlap than its predecessors have.

Improving Infrastructure Permitting

The Administration is also accelerating and rationalizing the process of permitting infrastructure projects. Its most significant action has been issuance of Executive Order No. 13807, "Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects."[12] This E.O. establishes a two-year goal for completing all federal environmental reviews and authorization decisions for major infrastructure projects. It also mandates that federal agencies involved in a project reach "One Federal Decision." This means that a lead agency will coordinate with all cooperating or participating agencies to reach one Record of Decision (ROD) under the National Environmental Policy Act (NEPA), and that all related federal approvals will be made within 90 days of issuance of the ROD. Finally, the E.O. extends elements of FAST-41 (e.g., permitting timetables and dispute resolution) to all projects subject to NEPA and involving more than one agency.

To implement these mandates, the 12 agencies on the Federal Permitting Improvement Steering Council (FPISC) jointly issued a memorandum of understanding that took effect in

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[8] Available at https://www.performance.gov/GovReform/Reform-and-Reorg-Plan-Final.pdf.
[9] *Id.* at 12.
[10] *Id.* at 4.
[11] Available at https://www.ferc.gov/legal/mou/2018/FERC-PHMSA-MOU.pdf?csrt=620057879745426299.
[12] 82 Fed. Reg. 40463 (August 24, 2017).

April 2018.[13] In addition, the Council on Environmental Quality has gathered public input on whether to propose to revise its regulations implementing the procedural provisions of NEPA.[14]

Business Roundtable members strongly support all of these actions.

Reforms Congress Could Act On

While the Trump Administration takes important steps to improve the three areas discussed above, Congress could also act to codify those improvements and to take actions the President, alone, cannot.

I. Regulatory Process Reforms

The single most important action Congress could take to improve the federal regulatory process would be to enact the Regulatory Accountability Act (RAA). Business Roundtable strongly supports this bill. The Senate bill (S. 951) strikes the appropriate balance in reforming the process without unduly burdening agencies or their decision-making processes. Most importantly, the RAA would:

- Promote earlier and greater public participation in the regulatory process;
- Codify the requirements of E.O. 12866 regarding cost-benefit analysis for major rules, and require agencies to pick the most cost-effective alternative, unless the benefits of a less cost-effective alternative justify its choice or the authorizing statute specifies a different standard;
- Extend this cost-benefit analysis requirement to independent agencies not now subject to E.O. 12866;
- Require that major rules include a framework for evaluating the ultimate effects of the rule — i.e., did it achieve what Congress intended; and
- Specify standards for agencies when they issue guidance documents.

II. Reducing Regulatory Overlaps

As noted earlier, Congress needs to address the many instances of regulatory overlap arising from the overlap of various statutes. In this regard, this Subcommittee and its parent Committee have important oversight responsibilities such as identifying specific examples of regulatory overlap and engaging with agencies to reduce the problem. It would be crucial for this oversight to include independent agencies, as they are a significant source of the problem. Options available to agencies to ameliorate overlap problems include:

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[13] *See* https://www.whitehouse.gov/wp-content/uploads/2018/04/MOU-One-Federal-Decision-m-18-13-Part-2-1.pdf.
[14] 83 Fed. Reg. 28591 (June 20, 2018). Business Roundtable filed comments in this docket. See https://www.regulations.gov/document?D=CEQ-2018-0001-11957.

- Negotiating memoranda of understanding between regulatory agencies or interagency working groups to achieve better coordination. In particular, agencies could seek opportunities to use these cooperative mechanisms to:
  - Clarify their respective roles and responsibilities;
  - Articulate individual and shared regulatory goals;
  - Harmonize guidance provided to jointly-covered entities;
  - Standardize adjudication processes;
  - Coordinate regulatory activities, including data requests and examinations; and
  - Establish data-sharing agreements and uniform data collection formats.
- Designating a lead regulator where multiple agencies have responsibility for oversight, with other regulators exercising both regulatory and enforcement deference to the lead regulator.
- Conducting joint rulemakings in instances where new rules stretch across the jurisdiction of multiple agencies. Joint rulemakings ensure government-wide consistency and eliminate regulatory uncertainty.
- Improving communication with those being regulated, including increasing the clarity and availability of guidance in regulatory areas prone to jurisdictional overlap. Agencies could also establish platforms to seek out input regarding the consequences of regulatory overlap, as well as potential solutions.

III. Accelerating Permitting

The most important action Congress could take in this area would be to enact a FAST-41 Amendments Act that would:

- Repeal the seven-year sunset contained in FAST-41;
- Codify the two-year goal for environmental reviews established by E.O. 13807;
- Allow projects under FAST-41 to be prioritized;
- Require that some portion of the FAST-41 fees not be due until the final decision is made, and for the fee to be reduced if and to the extent the final decision is delayed; and
- Repeal Section 11503(b) of the FAST Act, which excludes from FAST-41 any project under a program administered by the Department of Transportation or any of its modal administrations or by any other agency under US Code Title 49.

* * *

Once again, I appreciate the opportunity to testify before the Subcommittee today. This Subcommittee has led the way in focusing attention on the federal rulemaking process and has proposed a number of common-sense, bipartisan ideas for reforming this critical process. Thank you for the hard work that you do. I look forward to your questions.